The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. LVIII, No. 15 CHICAGO, ILLINOIS APRIL 13, 1912

ALLERGY OR ANAPHYLAXIS IN EXPERIMENT AND DISEASE *

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It is a general idea that when an animal previously injected with an antigenic substance is injected again with that substance, the immunity induced by the first injection is reenforced. Under certain circumstances, however, that would not seem to be the case, because violent, even fatal symptoms as well as other manifestations may set in after the second injection. This aspect of immunization has been studied very actively of late and results are being obtained that seem to place important pathologic processes in a new and clearer light.

In 1892, von Behring described an increased susceptibility in animals to diphtheria and tetanus toxins, even when they were immunized so that the blood contained antitoxin, and this condition he termed "hypersusceptibility." A few years later, Richet and Hericourt found that dogs, on reinjection with eel serum, which is primarily toxic, seemed to become increasingly susceptible rather than immune. And when Richet found that reinjection of extracts of actinia, in place of causing immunity, might give rise to acute symptoms that would differ from those ordinarily caused by the toxic constituents of the extract, he coined the word "anaphylaxis" to designate this peculiar condition as the reverse of prophylaxis. In 1905, von Pirquet, and Schiek published their classical studies of serum disease and in this, and in other publications by von Pirquet, is developed with great clearness, the conception that it concerns a change in the reactive powers of the body to the introduction of foreign substances, to designate which von Pirquet introduced the word "allergy" (*ergeia*, "reactivity" and *allos*, "altered"). In 1906, Theobald Smith's phenomenon became known: this name has been given to the violent and convulsive symptoms that may arise when guinea-pigs injected previously with mixtures of diphtheria toxin and antitoxin are reinjected with horse-serum.

This observation gave rise to a series of important researches by Rosenau and Anderson, Otto, and many others, and it has become established that when foreign protein is introduced into the tissues and blood of the body, there develops a condition which may manifest itself in acute symptoms, often fatal, and in other special ways, when that protein is introduced again under proper circumstances. This condition is transferable to normal animals by means of the blood and organs of prepared or sensitized animals, and animals passively prepared in this way present the characteristic symptoms, soon to be described, when injected with the protein in question.[1]

HYPERSUSCEPTIBILITY TO TOXINS

At first hypersusceptibility to toxins (Behring) and anaphylaxis were regarded as describing the same things, but now it seems that the toxin-hypersusceptibility may differ in important respects. Thus the symptoms of immediate anaphylaxis are essentially the same in the same species, no matter what the foreign protein, whereas toxin-hypersusceptibility is said to present the symptoms of intoxication caused by the toxin used for immunization. And then hypersusceptibility to toxins does not seem to be transmissible to normal animals, whereas in anaphylaxis the condition is so transferable, hence toxin-hypersusceptibility is excluded from further consideration at this time.

THE ANAPHYLACTIC EXPERIMENT

The typical experiment involves the first or sensitizing injection (or injections), the period of incubation and the reinjection. The exact quantitative relations have been determined best in the case of the guinea-pig, the animal used the most in this work because the most sensitive. It has been found that 0.001 c.c. of horse-serum, for instance, so changes a guinea-pig, sensitizes it, that a violent and fatal reaction occurs on reinjection of horse-serum (Rosenau and Anderson); in the case of beef-serum, 0.01-0.001 c.c. and even less leads to acute death when 0.2 c.c. of beef-serum are injected intravenously at the end of the incubation period (Dörr and Russ); 0.1 c.c. of a 10 per cent. suspension of red corpuscles induces anaphylaxis with respect to the corresponding hemoglobin (H. Pfeiffer and Mita); of pure egg-albumin one-millionth of a gram suffices to set up a fatal reaction on intravenous reinjection of one-tenth to one-twentieth of a milligram, and as little as one twenty-millionth of a gram makes a guinea-pig distinctly anaphylactic (Wells). With respect to bacterial and other proteins the quantitative relations have not been worked out so exactly. The first injection may be given subcutaneously, intraperitoneally, or intravascularly. From observations in connection with serum disease we know that human beings may be sensitized by a single injection of horse-serum. Rabbits and dogs do not respond nearly so easily as guinea-pigs, and several preliminary injections at intervals of a few days may be necessary. Guinea-pigs may be sensitized by the introduction of horse-serum and egg-white into the

* This article is a part of lectures on "Immunity" given on the Herter Foundation, New York University and Bellevue Hospital Medical College, New York, Jan. 8-13, 1912.

1. I omit all references to the literature on allergy or anaphylaxis, which I shall use as synonymous terms, because complete bibliographies are given by von Pirquet in his fine article on "Allergy," Arch. Int. Med., 1911, vii, 259; by Friedemann, "Anaphylaxie," Jahresb. ü. d. Ergebn. d. Immunitätsforschung, 1911, vi, 31, and by Schittenhelm, "Ueber Anaphylaxie vom Standpunkt der pathologischer Physiologie und der Klinik," ibid, p. 115.

stomach and the large intestine, and even by the inhalation of a fine spray of foreign serum. It is believed, also, that in man foreign proteins may enter the blood from the digestive tract, but probably only under pathologic conditions. The allergic reaction has been obtained in goats, sheep, horses, mice, chickens and pigeons, and is a phenomenon of general biologic significance.

In guinea-pigs injected with serum the period of incubation lasts about from six to eight days; when very small or very large quantities are injected it may last longer. In serum disease there is an incubation period of about the same length. At the end of the incubation the reinjection of the same protein as injected or of a closely related substance brings on the symptoms of allergy. Here the intravenous injection is the most effective, and the quantity injected must be several times that of the first injection (guinea-pig). The duration of the sensitive, allergic or anaphylactic state varies; facts obtained from various sources indicate that in some cases it may last for months and even years; in guinea-pigs the maximum sensitiveness occurs between the tenth to twenty-first days after the first injection.

In its various phases the allergic state recalls the course described by antibodies in the blood on introduction of antigens—there is the same latency, followed by a period of maximum intensity of development, and then a gradual fall. This correspondence becomes better understood when we consider that the allergic state is dependent, if I may anticipate, on the formation of specific antibodies.

SYMPTOMATOLOGY

Generally speaking the severe, general symptoms produced by different proteins are quite uniform and characteristic in the same species, while in different species the symptoms may vary because the same organs are not involved to the same degree, even when the reaction is produced by the same antigen. We are most familiar with the symptoms as they appear in the guinea-pig, dog, rabbit and man.

Guinea-Pig.—This animal gives the most constant and most intense symptoms, being, according to one statement, four hundred times as sensitive an anaphylactic reagent as the rabbit. On intravenous reinjection, the symptoms may be explosive and death may result in a few moments with dyspnea and convulsions. The symptoms develop somewhat slower on intraperitoneal and subcutaneous reinjections, and some minutes may elapse before the animal begins to scratch its nose and body. It becomes restless, seems to choke; convulsive movements occur about the mouth and throat; there is retching, discharge of urine and feces, and then convulsions, respiratory arrest and death may ensue. In the so-called paralytic form weakness with flaccidity of the muscles is characteristic; there may be combinations of the convulsive and paralytic forms. If recovery takes place there follows loss of weight. The most striking change observed after death is permanent distention of the lungs—the Auer-Lewis phenomenon. The lungs fill the chest cavity completely; the alveoli are distended, the walls may be ruptured; and the walls of the bronchi (secondary and tertiary, Schultz and Jordan) are contracted, owing, it has been found, to peripheral action, the death in reality resulting from asphyxia due to folding of the bronchial mucosa by the contraction of the smooth muscle in the bronchi, and not, as Besredka and others have asserted, from central causation. Multiple hemorrhages occur in the lungs and elsewhere associated with fatty changes.

H. Pfeiffer has shown that depression of the temperature is constant in the severer forms of anaphylaxis in the guinea-pig. In fatal cases this fall may be as much as from 7° to 13° C. In all cases in which the animal survives there is a close relation between the severity of the symptoms and the extent of the fall of the temperature—the severer the symptoms the deeper the fall and the longer the time required for the animal to reach its normal temperature again. These two factors, the extent and duration of the fall, are used to obtain accurate measurements of the degree of shock. It is important to note that the reinjection of very minute quantities of antigen may raise the temperature.

Leukopenia and a temporary loss of complement in the blood also occur in instances not immediately fatal.

Dogs.—In this animal the symptoms are not so violent as in the guinea-pigs, and deaths are infrequent. On intravenous reinjection there is great restlessness often with screaming; soon the animal becomes very weak, falls over, and it may be still perhaps for hours; feces and urine are usually discharged; dyspnea is not marked, but there is a rapid fall of blood-pressure, sometimes to the extent of 80-100 mm. and it has been found that this is due to peripheral action on the splanchnics. When the pressure begins to rise, the other symptoms begin to disappear. In some cases blood is discharged from the intestines and there may develop a condition of hemorrhagic inflammation, in both the large and the small intestine, which Schittenhelm and Weichardt have termed "enteritis anaphylactica." There is leukopenia with loss of mononuclears, and the coagulability of the blood is reduced.

Rabbits.—Arthus noted that in rabbits subcutaneous reinjection of horse-serum may cause local edema and even necrosis—Arthus' phenomenon; (similar phenomena may occur in other species). In addition, nonfatal anaphylaxis is associated with respiratory disturbances, marked prostration, fall of blood-pressure, increased peristalsis. In rabbits highly sensitized to horse-serum by repeated injections and then given 5 c.c. of fresh serum intravenously, Auer observed a short clonic convulsion, weakness or absence of the heart-beat, and death; in this case death is due to a change in the heart-muscle, a chemical rigor, which is most pronounced in the right ventricle. Blood coagulation is delayed.

Man.—In human beings the injection of therapeutic serums may give rise to a variety of allergic phenomena. A few instances of alarming collapse and even of death, the immediate symptoms being not unlike those of immediate anaphylaxis in guinea-pigs, have occurred after the first injection of antidiphtheria serum, and in such cases it is not clear how sensitization has been produced. The suggestion has been made that, in some cases, sensitization has resulted from the oral introduction of horse-meat or closely related substances.

It is possible that under very special circumstances the poisonous substances causing the symptoms may develop through autolytic processes in the serum itself, or from the action of the serum on the proteins of the patient. In most cases we probably shall have to rest content with the assumption that for reasons not now understood, the persons so affected harbor in their blood an unusually large amount of the antibodies concerned in the reaction. Schultz and Jordan suggest that the occasional severe serum phenomena in man are due to an abnormal development of the bronchial mucous mem-

V. 5
1912

brane whereby asphyxia is produced on contraction of the bronchial muscle.

The more familiar, typical serum disease, concerning the allergic nature of which there is no question, is peculiar in that the symptoms may appear after only one injection of serum, usually in from eight to twelve days. In this case part of the antigen, that is, the horse-serum, is assumed to remain unchanged, or incompletely changed, possibly in the skin at the point of injection and elsewhere, until enough of the substances required to cause a sharp reaction has been produced by the body. If serum is reinjected some days after the first injection, there may develop an immediate reaction, with marked local changes even in case of small doses of serum, and sometime with severe symptoms and collapse. In this case the conditions and general results of the anaphylactic experiment are reproduced quite accurately. Or the reaction after reinjection may be accelerated, that is, develop after a short period of latency (from five to seven days). Here also the manifestations may be severe. The ordinary symptoms of serum disease are so familiar that it is only necessary to mention them: urticarial and erythematous eruptions, local and general edema, swelling of lymph-nodes, pains in the joints, headache, weakness, fever and leukopenia. In some cases there may be a bloody diarrhea.

In by far the larger per cent. of cases the first injection of antidiphtheria serum as now used — concentrated and properly aged — does not produce any symptoms of serum disease; here we can assume that the foreign proteins are disposed of so gradually and in such a way that sufficient toxic substances are not formed at any one time to cause symptoms. Other forms of allergic manifestations in man are discussed later.

From this consideration of the functional and other disturbances in anaphylaxis it is clear that the criteria and standards of measurement are more or less peculiar to each species.

THE ANAPHYLACTOGENIC OR ALLERGENIC SUBSTANCES

The anaphylactic reaction is obtainable with a variety of substances such as serum, milk, egg-white, cells (animal, vegetable, bacterial) and more or less pure proteins. These are substances that have the power to induce in suitable animals the formation of antibodies, i. e., they are antigens.

Now, the bodies that take part in the anaphylactic reaction follow the same laws of specific action as the antigens and antibodies, with the action of which *in vitro* we are familiar. In both cases, species-specificness obtains with respect to most antigens, that is to say, in the case of anaphylaxis, the reaction that has been discussed is obtainable only by means of the protein used to sensitize the animal, or from some closely related species; and usually best by means of the very same protein as that used for sensitization. Dörr and Russ found that guinea-pigs of the same weight, passively sensitized in the same way with the same quantity of antisheep-serum, reacted on reinjection of the serums about to be mentioned in the following minimal doses:

Sheep-serum	0.004 c.c.
Goat-serum	0.004 c.c.
Beef-serum	0.01 c.c.
Swine-serum	0.6 c.c.
Human serum	1.0 c.c.
Horse-serum	2.0 c.c.
Chicken-serum	No reaction.

This illustrates species-specificness in anaphylaxis. This specificness is well marked in case of bacteria.

In strongly immunized or sensitized animals the scope of the reaction becomes extended so that it reaches over to more or less closely related species. It is said that in the case of fish protein the specific limitations are not so precise as in birds and mammals. Human and ape, horse and ass, sheep and goat, rat and mouse serum-proteins are not distinguishable by the anaphylactic reaction; rabbit and hare proteins are.

Some animal proteins appear to possess a specificness of their own, in addition to the specificness of species: Thus hemoglobin and blood-serum are limited in their reactions by species at the same time as they seem to be in some degree distinct the one from the other. In certain cases at least, milk is different from blood-serum.

It is highly interesting, indeed, that certain animal proteins have no species-specificness. This is illustrated by the crystalline lens. Uhlenhuth found that the lens of one species is not distinguishable from those of other species by means of the precipitin reaction, and this seems to be the case, also, with respect to the anaphylactic reaction: Guinea-pigs injected with extracts of beef-lens react not only to these extracts, but also to lens-extracts of widely separated species and even of the guinea-pig itself, but not to the corresponding serum-proteins. We may say that the lens-proteins are strictly organ-specific and without species-specificness. Results are recorded that indicate that the tissues of the uveal tract, the sexual cells, especially of the male, and cells of malignant tumors contain substances with organ-specific characteristics, but further investigation is necessary before any final conclusions are indicated.

Here may be mentioned that fetal tissue, placenta and amniotic fluid in experiment may cause anaphylaxis in their own species—observations of great significance in connection with the problem of eclampsia.

In order to determine accurately questions of specificness it is necessary to work with pure materials. This is not yet possible with many protein substances of animal origin, but the results obtained with vegetable proteins and recrystallized ovalbumin are of much interest and indicate that the specificness of the anaphylactic reaction is intimately connected with the structure of the protein (Wells and Osborne), and that this reaction can be used to determine the relation of one protein to another, when these are so nearly alike that differences between them cannot be recognized by careful comparison of their chemical and physical properties. To quote Osborne (Harvey Lectures, 1910-11):

> Preparations of globulin from the seeds of hemp, flax, squash, and castor-oil plant are obtained which are so nearly alike in ultimate composition, crystalline form, solubility and physical properties that only the most minute examination reveals any differences between them. While these proteins showed a strong anaphylaxis reaction, only those from the flax-seed and castor-bean showed any tendency whatever to react with each other, and between these the reaction was of a doubtful character. On the other hand, gliadin from rye reacts strongly with gliadin from wheat, a result in accord with the fact that by chemical and physical means no differences have been detected which were sufficient to indicate that these gliadins were different substances. Likewise legumin from the pea reacts with the apparently identical legumin from the vetch. No reactions were obtained between proteins of distinctly different structure nor between those from seeds botanically unrelated.
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> From these facts it is evident that structural differences exist between very similar proteins of different origin and it is interesting to note that chemically identical proteins apparently do not occur in animals and plants of different species, unless they are biologically very closely related. In this

respect the proteins are in marked contrast to the other constituents of plants and animals, for not only do the same sugars and fats occur in many species of plants and animals, but many of these are common to both forms of life. The morphologic differences between species find their counterpart in the protein constituents of their tissues.

ARE SENSITIZATION AND THE REACTION CAUSED BY THE SAME SUBSTANCES?

On heating horse serum, Besredka found that it would no longer cause reaction in sensitized guinea-pigs and yet would sensitize normal pigs; hence, he concluded that in serum anaphylaxis are concerned two substances in the foreign serum — a thermolabile intoxicating substance and a thermostable sensitizing substance. Since it requires only one-hundredth as much serum to sensitize as to cause the symptoms of the reaction, it becomes necessary to use exact quantitative methods in experiments of this kind and, on using such methods, Dörr and Russ have found that heating apparently affects both qualities of the serum equally, indicating that it concerns only one substance.

From their work on egg-white and certain bacterial proteins, Vaughan and his co-workers also conclude that the reaction depends on two substances, because on heating the proteins in question in hot alcohol with 2 per cent. sodium hydroxid they obtained two substances, one of which in normal guinea-pigs causes typical symptoms of the immediate anaphylactic reaction, including respiratory arrest and fall of temperature, while the other one, at least so far as the one that is derived from egg-white is concerned, sensitizes guinea-pigs to whole egg-white, but not to itself.

Using the purest protein obtainable, namely, crystalline egg-albumin, Wells found that one-twenty-millionth of a gram produced a distinctly sensitizing effect while one-millionth of a gram would prepare for a fatal reaction, the minimum second dose being one-twentieth of a milligram intravenously. This result would seem to indicate that sensitization and intoxication are caused by the same substance. At present the general opinion seems to be that the two effects are induced by the protein molecule itself and the fact that the purer the egg-albumin is made by recrystallization, the smaller the quantity necessary to sensitize, points in this direction.

Because gelatin, which is poor in aromatic radicles, does not sensitize and because it does not yield any toxic substances when injected into animals, it has been suggested that the anaphylactic reaction of proteins may depend on the aromatic radicles.

As protein substances that are not coagulated (like casein) when heated, may be heated to 100 C. without losing their allergenic characters, it would seem as if the physical change on coagulation suspends the sensitizing effect. As sensitization by the mouth must be exceptional, it would seem also as if the antigenic powers of proteins are destroyed by digestion, and Wells found that tryptic digestion gradually destroys the sensitizing power which runs parallel with the remnants of coagulable protein.

In all cases in which lipoids have been assumed to act as anaphylactogenic substances, the possibility that proteins were present in the alcohol or ether extracts used cannot be excluded.

PASSIVE ANAPHYLAXIS

Passive anaphylaxis is produced by injection of normal animals with the blood or serum of animals or persons already sensitized. It is the analogue of passive immunization and is specific for the antigen with which the donor is sensitized. Guinea-pigs have been used almost exclusively for the study of this phenomenon, which plays an important rôle in the explanations of anaphylaxis, but it is not essential that the animal furnishing the blood or serum be of the same species as that injected. In guinea-pigs passive sensitization may last for fourteen days and longer. At this point may be mentioned that the young of sensitized guinea-pigs may be born sensitive, and remain so for a longer or shorter time. Passive anaphylaxis was described first by Otto on the basis of experiments illustrated by the following: A guinea-pig was injected in the peritoneal cavity with 0.1 c.c. of horse-serum; twenty-one days later it was bled and the serum injected in a healthy guinea-pig, which twenty-four hours later on injection of horse-serum responded with a typical anaphylactic reaction. First it was believed that a certain period must elapse between the injection of the serum of the sensitized animal, that is the antiserum, and of the antigen; this interval was assumed to be necessary in order that the active element or antibody in the serum might become anchored in the proper way to the cells, especially of the nervous system, of the animal injected. This assumption is no longer necessary because Dörr and Russ and others have shown that when the optimal quantitative relations are obtained, an immediate passive anaphylaxis may be produced. By simultaneous intravenous injection of antiserum and antigen after adjustment of the quantitative relations, Friedmann obtained immediate passive anaphylaxis in rabbits also. At the same time, it is true that this period of latency observed in so many of the experiments in passive anaphylaxis has not been explained altogether satisfactorily.

ANTIANAPHYLAXIS OR ANERGY

This condition succeeds the anaphylactic reaction from which the animal recovers and is complete insensibility to further reinjection of the antigen. The animal behaves as if it never had been sensitized; after three weeks or longer it gradually becomes sensitive again. This refractory state may be demonstrable within one hour after the reaction. In the case described by de Besche, of severe acute symptoms with collapse, following injection of antidiphtheria serum, the patient became insensitive to odors and other emanations from horses which previously incited attacks of asthma; the former sensitiveness returned after about six months. Whether the refractoriness to tuberculin that develops in certain cases of tuberculosis is antianaphylaxis is not known. In addition to being produced by a non-fatal intoxication refractoriness may be induced also by a large dose of the antigen in the latter stages of the incubation. Reinjection of refractory animals with large doses of antigen is said to prolong the state of refractoriness. It is usually stated that this state is specific, that is to say, producible only by the protein used for sensitization, but this is not altogether clear as there are contradictory observations. In the dog and guinea-pig, it is claimed that it may be set up by intoxication with Witte peptone.

Several explanations have been advanced in regard to antianaphylaxis. At first it was thought that it concerned an antitoxic immunity, but the condition does not correspond to the induced immunity with which we are familiar, because there is no incubation period, and the serum of refractory animals, instead of being protective as would be expected from the point of view of this hypothesis, actually confers passive sensitization.

According to Friedberger, the refractory state results from the antibody in the serum being neutralized by

the antigen; in other words, that we are dealing with a negative phase in antibody formation; but this does not cover the facts, first because the serum from refractory animals confers allergy and, in the second place, because the refractory state may develop after a passive anaphylaxis, that is to say, after the injection of antibody antigen mixtures. Among other possibilities we have the disappearance of the complement, but this is merely transitory whereas the refractory state may last for some time. At present this condition must be viewed as an unexplained suspended or reduced susceptibility to anaphylactic poisons.

THE MECHANISMS OF ANAPHYLAXIS

The earlier observations were made on man, on dogs and on rabbits, and the relationships of the anaphylactic phenomenon to antibody formation seemed to be so clean-cut that it was regarded as an antibody reaction *in vivo*. It was believed that on the first injection an antibody was formed which, on meeting the antigen on reinjection, set free the poison (Weichardt, Richet, von Pirquet, Wolff-Eisner). Von Pirquet expresses this conception most clearly in his discussion of serum disease, the period of incubation of from eight to ten days being the period necessary for the formation of the antibody, while the immediate reaction and the accelerated reaction correspond to the shortening of the incubation in previously sensitized or immunized animals.

Richet advanced a hypothesis similar to this. He used a primarily toxic antigen and did not consider the possibility of the origin of the anaphylactic poison from non-toxic proteins. Consequently he assumed the development of an antibody which he called "toxogenin," which, acting on the toxin that he introduced, split off a new toxic substance, "apotoxin." Weichardt and Wolff-Eisner extended Pfeiffer's endotoxin hypothesis to anaphylaxis and regarded the toxic substance as preformed in the antigens and as set free by the action of the antibody on the antigen. Friedemann and Isaac observed that when foreign proteins are introduced parenterally they are reduced gradually to urea in normal animals, but in animals treated with protein the reinjection of that protein was followed by the manifestations of anaphylaxis and evidences of rapid protein splitting. Hence they concluded that the first injection resulted in the formation of antibodies which caused rapid splitting of the protein when this was reinjected, with the formation of toxic intermediary products. Similar hypotheses were advanced by others as, for instance, Nicolle.

Then came 1906, with the intense work on serum anaphylaxis, especially in guinea-pigs, that followed when Theobald Smith's phenomenon became known. The minuteness of the sensitizing dose, the duration of the sensitive state, the refractoriness following large reinjections and the failure to find in the guinea-pig any antibodies, the action of which *in vitro* was known, served to push aside the older view in place of which came various hypotheses of a cellular nature.

These conceptions were overthrown when Otto and others found that guinea-pigs might be rendered sensitive by the transfer of the serum of sensitized animals. As the transfer of anaphylaxis, however, seemed to succeed only when the serum was introduced twenty-four hours or so before the injection of the antigen, it still was insisted that the active substance in the serum must first be bound to the cells of the nervous system. The immediate inactivity of the antigen-antiserum mixture seemed to make it necessary to assign an active part to the cells. But this stumbling-block in the way of the humoral hypothesis was removed when it was found that mixtures of antibody and antigen in proper quantitative relations may cause an immediate passive anaphylaxis. At present the prevailing idea is that allergy both to protein in cells and to dissolve proteins is essentially a humoral process, and it is unquestionably true that the return to the general view expressed by Friedemann and others several years ago has pointed the road for further progress by presenting problems susceptible of attack.

On analyzing the circumstances under which an immediate passive anaphylaxis is obtainable it was found, first, that complement is necessary; second, that the specific element in the antiserum or sensitive serum is thermostable and that in case of anaphylaxis with respect to red corpuscles, it is bound by the corpuscles, hence, acts as an amboceptor. In serum anaphylaxis the binding of the complement also pointed to an amboceptor-like mechanism. It was found, further, that complement in the blood is diminished in anaphylaxis and that the reaction is preventable by the injection of hypertonic salt solution, which, as is known from other experiments, prevents the complement from acting.

The general conception at present is, then, that on sensitization, immunization with proteins, substances of the general nature of amboceptors are formed; these are specific and their union with the antigen in cooperation with complement results in the formation of substances that produce the anaphylactic symptoms and lesions. The action is regarded as one of protein digestion, first, because the toxic effect closely resembles that of substances in Witte peptone, i. e., substances obtained in the course of protein splitting, and second, because evidence of actual protein splitting in mixtures of antigen and antiserum may be obtained by chemical means as well as by observations on their rotatory power (Abderhalden's polariscopic method).

At this point it may be recalled that Vaughan, from the similarity of the symptoms of egg-white anaphylaxis and those following the injection of toxic split-products of egg-white, was one of the very first to advance the idea that the anaphylactic intoxication is caused by protein split-products and that there is an increase in the protein-splitting power of the blood of sensitized animals. Vaughan speaks of this power as dependent on a ferment which is present in extracts of organs of sensitized guinea-pigs, these extracts splitting the protein in question, namely egg-white, so that its injection into normal animals causes immediate symptoms. The active element in these extracts is rendered inactive by heating to 56 C., and may be reactivated with normal serum in quantities so small as to be without action by themselves, thus indicating a mechanism which immunologists would regard as dependent on the action of amboceptor and complement.

The production of proteolytic and peptolytic ferments in the blood after the parenteral injection of proteins is now being studied by chemical and physical as well as biologic methods. Abderhalden and Pinkussohn find that in dogs the introduction of gelatin, for instance, leads to the formation of non-specific peptolytic ferments. Dick, on injection of serum and bacterial proteins, obtained evidences of the formation of specific proteolytic substances of the nature of amboceptors, that is, activable by means of complement. Further developments may be anticipated with great interest, as the indications are that the conception of parenteral protein

digestion will play an increasingly important part in our explanations of many of the phenomena of infection and immunity.

THE RELATION OF THE ANAPHYLACTIC ANTIBODIES TO OTHER ANTIBODIES

I have tried to make it plain that in the typical anaphylactic reaction, bodies come into play which are of the nature of amboceptors because they require complement for their action. The relation of these bodies to antibodies whose action is demonstrable *in vitro* is still under discussion. In the case of allergy to red corpuscles, Friedemann finds that there is a close parallelism between the anaphylactic bodies and the hemolytic amboceptors. In rabbits, Dörr and Russ and others find a complete parallelism between the precipitins and the bodies concerned in anaphylaxis. There is no such parallelism, however, in serum disease, and the question whether allergy depends on the action of a distinct and peculiar antibody is still an open one.

THE PRODUCTION OF ANAPHYLACTIC POISONS IN VITRO

Vaughan, Friedberger and others have shown that substances which in guinea-pigs cause symptoms indistinguishable from those of immediate anaphylaxis in sensitized animals may be produced *in vitro*. Various methods employed for this purpose may be divided into specific and non-specific.

By the specific method the antigen, the antibody and the complement are brought together under certain conditions and the question whether any poison is formed is determined by removing the antigen-antibody complex and injecting the clear fluid. In the case of red corpuscles, Friedemann obtained anaphylactic substances in this way, even before lysis occurred. He concluded that the poison is a split product and not a preformed substance because the mere laking of the corpuscles with water does not necessarily set free any poison.

Substances producing the symptoms of typical anaphylaxis have been obtained from a large number of bacteria by the action of antiserum and complement. Even normal guinea-pig serum may suffice, the normal amboceptor present being regarded as the active agent. In experiments of this kind the conditions that must be observed seem to vary in each case.

Friedberger has also obtained anaphylactic poisons from the specific precipitates that form when serum and the corresponding antiserum are mixed; the precipitate is washed and digested with guinea-pig serum. Here also certain quantitative relations must obtain and the digestion must not be continued too long.

R. Pfeiffer long ago obtained poisons in the course of bacteriolysis which he regarded as preformed and termed "endotoxins"; Weichardt obtained poisons from the action of specific antiserum on placenta and Wolff-Eisner in like manner from pollens, and these results were interpreted by them in the light of the endotoxin hypothesis, that is, as due to the setting free of preformed poisons.

Of the non-specific methods I mention the hydrolysis of egg-white and other proteins with hot alcohol, practiced by Vaughan and Wheeler, whereby they obtained an alcohol-soluble substance which in guinea-pigs caused all the typical symptoms of immediate anaphylaxis. Biedl and Kraus have found that in dogs, peptone (Witte) poisoning reproduces the symptoms of anaphylaxis including fall of pressure, incoagulability of the blood, leukopenia and a temporary refractory state not only to peptone, but also to true anaphylactic intoxication; furthermore, that in antianaphylaxis there is refractoriness to peptone poisoning. Manwaring, however, was not able to confirm the latter observation.

When pneumococci, streptococci, meningococci, gonococci, typhoid bacilli, colon bacilli, and other bacteria are suspended in salt solution for varying periods of time, Rosenow, in The Memorial Institute, finds that toxic substances develop which on intravenous injection give the phenomena of immediate reaction in guinea-pigs. In such suspensions evidences of protein splitting are obtainable by chemical and physical means. Rosenow also finds that intoxication with pneumococcus autolysates gives rise to conditions of refractoriness (antianaphylaxis). In man, solutions of this kind cause fever and leukocytosis. Rosenow's work seems to establish then that substances causing the symptoms of acute anaphylaxis may develop in the course of autolysis of bacteria without the presence of serum.

In all these experiments *in vitro* the criteria that it concerns similar substances as those that are at work in true anaphylaxis are the symptoms observed during life and the appearances after death. So far, guinea-pigs have been used, as they are the most sensitive. Objections have been made to the reliability of the conclusion that the same substances are at work in anaphylaxis in the sensitized animal and in intoxication by the substances obtained in the test-tube. It is very important to proceed cautiously in order not to fall into confusion, but it may be emphasized that by the specific test-tube methods the conditions obtained in life are closely imitated, so that it is not unlikely that the actual poisons exciting the symptoms in the sensitized animal are obtainable outside of the body. At all events an interesting field for further study has been entered. There is ground for objection to Friedberger's name of "anaphylotoxin" for all these substances; in the first place, it probably does not concern a single substance, but a variety of more or less closely related substances; in the second place, it does not concern substances of the nature of toxins in the immunologic sense because they do not appear to induce the formation of antitoxins. Further progress depends on obtaining an insight into the true chemical nature of the substances concerned.[2]

ALLERGIC (UNPUBLISHED) MANIFESTATIONS IN DISEASE

There are various manifestations in infectious and other diseases that point to the occurrence of reactions of the nature of anaphylaxis or allergy. Let us first briefly consider infectious diseases from this point of view.

THE INCUBATION PERIOD

In many infections the incubation period corresponds more or less closely to the period preceding the acme in antibody formation, and on the basis of this fact, von Pirquet has developed the idea that the symptoms are not the exclusive result of the direct and immediate action of the microbe, but in greater or less measure the result of interactions between microbe and host. In many cases it would seem as if the symptoms arise when the antibodies have become concentrated enough to break up the microbe, in other words, when specific proteolysis begins. The fact that the first symptoms of serum disease usually begin in from eight to twelve days after

2. Rosenow seems to have been able to effect a separation of substances in toxic pneumococcus extracts by means of ether, the ether-soluble part causing death by pure bronchial spasm, while the insoluble part does not affect the bronchioles but may cause death in twenty-four hours or so with hemorrhage in various internal organs (unpublished).

V. 5
1912

the first injection supports this idea. In persons previously injected with serum the incubation period is greatly shortened or practically absent because here the antibodies appear more quickly and attack the protein promptly. It is possible that in many of our common infections the incubation period is shortened on account of sensitization from previous mild attacks. The shortening of the incubation period is illustrated beautifully by von Pirquet's work on vaccinia. After primary vaccination the reaction about the point of inoculation reaches its maximum between the eleventh and fifteenth days, when there is also fever with leukopenia. Now, on revaccination after the lapse of some time, various types of early and accelerated reactions may be observed, and von Pirquet has shown that on daily vaccinations in an unvaccinated person for a fortnight or so, the maximum reaction occurs at the same time about all points of inoculation, namely, at the time it is due about the earliest inoculations. Here we may assume that the antibodies educed by the first vaccination, on reaching the required concentration, act in the same way on the virus deposited in the skin from day to day.

It is possible that in some infections the microbes as they enter the body are broken up by the normal antibodies and also that a spontaneous or autolytic splitting may occur with corresponding irregularities in the period of incubation.

FRIEDBERGER'S ANAPHYLATOXIN VERSUS PFEIFFER'S ENDOTOXIN HYPOTHESIS

Friedberger ventures the explanation that practically all symptoms of infections are caused by anaphylatoxin or substances of that general nature arising from protein splitting, the variations in the symptoms depending on the quantity of the poison set free, on the rate of liberation, and on the differences in localization. This leads to a brief consideration of Pfeiffer's endotoxin hypothesis according to which symptoms of intoxication are due to preformed substances—endotoxins—set free on lysis of the bacteria or protozoa.

All microbes are assumed to contain poisons of this general nature, the infectious microbes being dangerous because they can grow in the body for a time at least and thus furnish large quantities of poison. Immunization with this class of bacteria gives rise to specific lytic and opsonic amboceptors and other antibodies. Now the question is whether this endotoxin hypothesis is to be replaced by the anaphylatoxic. We observe that the mechanisms assumed at work are essentially the same, namely, of amboceptor-complement nature. Hence the question actually narrows down, one might say, to whether Pfeiffer's endotoxins are preformed or simply transitory split products formed in the course of bacteriolysis. Friedberger's view does not account so plausibly for the specific actions of the substances in question as the endotoxin conception. The symptoms and lesions in these infections are characteristic and peculiar in each case and it is hard to believe they can be caused by the same substances. Friedberger's view is also out of harmony with the prevailing idea that in the microbes the toxic and the antigenic substance is one and the same in each case, but different in the different bacteria because the resulting antibodies are specific. The indications therefore seem to be that the fragments of lysis which cause the toxic symptoms retain certain original peculiarities. It has been urged against Friedberger's view that we rarely if ever encounter, so far as we know, intoxication in natural infections resembling those of the typical anaphylactic reaction, but as to this it may be said that in infections the amount of poison set free at any one time may not be sufficient to produce such intense effects. Even if Friedberger's conception may not succeed in replacing the endotoxin hypothesis, progress in our knowledge of infectious and other diseases has resulted. Surely the non-specific and non-antigenic substances produced in the breaking down of foreign proteins may take part in causing general disturbances of temperature, of metabolism, and of the leukocytes.

CUTANEOUS MANIFESTATIONS

Von Pirquet has pointed out the analogy between the eruptions in small-pox, varioloid and vaccinia to the skin lesions of serum disease. In small-pox the eruptions contain the living virus of the disease because this is transferable by means of the contents of the vesicles and pustules. This virus is brought to the skin by the blood, and as the eruption occurs at a period after infection that corresponds to the climax in antibody formation, it seems reasonable to believe that the cutaneous reactions develop as the virus is attacked. Indeed, by complement deviation it has been found that the contents of the pustules do react with the serum. Viewed in the same light varioloid may be regarded as an allergic modification of small-pox, due to reinfection in a sensitive person.[3] And it has been suggested that hemorrhagic small-pox may be an expression of a specially intense reaction between antigen and antibody. Of other diseases that present striking relationships of this nature I would mention measles with its definite incubation period, its leukopenia, and its eruption with fever at a time that corresponds nicely to the acme of the antibody curve. The skin, then, offers a series of very interesting phenomena from the point of view of allergy; the cutaneous lesions of serum disease, the eruptions of many infections, reactions like the tuberculin reaction, the urticarias and eczemas and other manifestations of what is coming to be called alimentary anaphylaxis all indicate that the skin has not only a marked affinity for foreign protein substances, but reacts in a striking manner to the various split products.

TUBERCULIN AND SIMILAR REACTIONS

That the tuberculin and similar reactions, like Noguchi's recent luetin reaction, the gonococcus reaction of Irons, etc., are of allergic nature can hardly be ques-

3. The recognition of the importance of allergy is preceded by isolated observations of allergic phenomena, the bearing of which, however, was not understood at the time. As examples, I would mention that long ago while transfusion of lamb's blood was practiced in anemia and other conditions, it was observed that sometimes urticarial eruptions would appear a few days after transfusion. Magendie noted (1839) that in rabbits, repeated intravenous injections of egg albumin may give rise to serious symptoms. But perhaps the most interesting of these early observations on allergy is that of Jenner on the character of the reaction to variolous matter by the skin of persons who had had either small-pox or cow-pox. In his "Inquiry into the Causes and Effects of Variolæ Vaccinæ, a Disease Discovered in Some of the Western Counties of England, Particularly Gloucestershire, and Known by the Name of Cow-Pox," 1798, he records (page 13, Case 4) that a woman who had had cow-pox thirty-one years before was inoculated with variolous matter, and that "an efflorescence of a palish, red color soon appeared about the parts where the matter was inserted, and spread itself rather extensively, but died away in a few days without producing any variolous symptoms." In a footnote he comments on this phenomenon as follows: "It is remarkable that variolous matter, when the system is disposed to reject it, should excite inflammation on the part to which it is applied more speedily than when it produces the small-pox. Indeed, it becomes almost a criterion by which we can determine whether the infection will be received or not. It seems as if a change, which endures through life, had been produced in the action, or disposition to action, in the vessels of the skin; and it is remarkable, too, that whether this change has been effected by the small-pox or the cow-pox, that the disposition to sudden cuticular inflammation is the same on the application of variolous matter." This remarkably clear statement probably records the first observation of allergy in an infectious disease.

tioned. The tuberculin reaction, though best developed in the tuberculous, is obtainable after sensitization with various forms of tuberculo-proteins. Typical immediate anaphylaxis has been produced in guinea-pigs with watery extracts of tubercle bacilli by Baldwin; and Friedberger has extracted anaphylactic poisons *in vitro*. The quantitative relations of the reaction are similar to those in repeated vaccination, progressive dilution leading to diminishing intensity. And passive transfer of the reaction has now been accomplished in a number of ways so that at least the general and local reactions are readily explained on a humoral basis. The failure to obtain the reaction in certain conditions of advanced tuberculosis and other states remains to be explained.

SYMPATHETIC OPHTHALMIA, ECLAMPSIA, HAY-FEVER, ASTHMA, IDIOSYNCRASIES

Space does not permit any attempt at discussion of the possible anaphylactic nature of many of the other local reactions and lesions of infectious diseases, many of which may be conceived as the results of the localization of foreign proteins and their destruction by antibodies in the blood and lymph. In passing, mention may be made, however, of the possibility that in infectious diseases proteins of the body itself, especially in the severe lesions, may become so changed or heterologized as to acquire antigenic powers, and on reacting with the antibodies give rise to toxic substances. It has been suggested that certain drug eruptions, notably iodid and bromid eruptions, may rest on some such basis as this.

At this point I would mention that since it has been shown that the lens protein, and possibly also uveal tract protein, may cause antibodies in the animal from which they are obtained, the thought has arisen that sympathetic ophthalmia may be an allergic phenomenon. After partial destruction of one eye and absorption, the uveal tract of the other eye might be affected by the antibodies thus formed. For the present this must be viewed as an interesting suggestion only.

And the hope that puerperal eclampsia may receive adequate explanation from the point of view of anaphylaxis has received new support since it has been announced that animals of the same species may be made anaphylactic not only with the placenta, but also with the amniotic fluid and fetal serum; and, furthermore, that immediate anaphylaxis may be obtained by injecting pregnant guinea-pigs with serum of their young, indicating that sensitization may occur during pregnancy.

The experimental evidence clearly favors the view that hay-fever is an anaphylactic reaction to various pollens which are believed to be split up into poisonous substances in the mucous membranes of the respiratory tract. And the asthmatic symptoms that appear in certain persons when exposed to the odors of horses and of other substances naturally are regarded as expressions of anaphylaxis.

The view that the peculiar idiosyncrasies, so-called, with respect to certain articles of diet — strawberries, cheese, fish, oysters, buckwheat, pork, eggs, cow's milk, etc. — are forms of anaphylactic reactions is steadily growing, and the chapter of alimentary anaphylaxis is already a large one, although in only a very few instances have cases been analyzed carefully from this point of view. Thus, Bruck found that guinea-pigs were made passively sensitive to pork protein by the serum of a person that always reacted violently to pork. Interesting examples of extreme sensitiveness to cow's milk in infants and to egg-white have been described. In connection with this subject of alimentary anaphylaxis it should be mentioned that the proteins of the intestinal bacteria under certain conditions might give rise to symptoms of sensitization.

This then, must suffice as indications and suggestions of the part that what is called allergy or anaphylaxis may play in guiding us to better explanation of various phenomena in infections and other diseases.

WHAT OF ANAPHYLAXIS AND IMMUNITY?

The conception that introduction of microbes and their products induced distinctly protective reactions is seemingly not in harmony with the fact that an increased susceptibility seems to develop after introduction of all foreign proteins, whether cellular or in other forms. But this contradiction is only apparent. In the first place, there is, in most cases at least, probably no real increase in susceptibility — the actual degree of susceptibility to the same poisons being probably the same in the average normal and average sensitized animal; it is the power of reaction of the latter that is peculiar and for this reason "allergy" is perhaps the best word we have for the condition. Stated in the simplest way, we could say that the sensitized animal splits up a particular protein so rapidly that toxic substances are produced or set free in toxic quantities, while in the normal animal the process proceeds so slowly that no evident intoxication may result. Now in the case of microbes, lysis with splitting is not consistent with continued existence, and when small quantities are introduced as in natural infections, they may be killed in this way before they can multiply so as to furnish toxic doses of poison, and this would be immunity, either natural or acquired. The relations between antibacterial immunity and intoxication remains essentially the same as outlined by Pfeiffer. While he limited himself to the conception of preformed endotoxins, under the newer view we conceive the poisonous substances as being, at least in part, intermediary digestive products and as arising also in part from changes in harmless proteins. There is then no contradiction between immunity and allergy, which is a form of antibody reaction and, so to speak, an incident in the course of immunization.

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THE TREATMENT OF SACCULATED ANEURYSM BY WIRING AND ELECTROLYSIS

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The treatment of sacculated aneurysm by the introduction of various foreign bodies, ranging from nails to strands of silk and horse-hairs, was practiced many years ago. The design was of course to aid or produce clotting in the sac and so to reenforce the weakening aneurysmal wall. These measures failed chiefly because most of the operations were performed before the days of asepsis, or else they caused so much damage to the sac-wall that its continuity was destroyed and the end hastened. It is not my intention in this paper to go into a historical review of these cases, or of the early trials of more recent methods, such as the Moore-Corradi operation, which

I have performed on twenty-two occasions[1] for saccular aneurysm of the various parts of the aortic arch. Six of my cases are now recorded for the first time. In every instance the growth was so large that death in the early future was imminent, and in several the wall of the sac was so thin as to be blue or blackish in hue like a great ecchymosis, and bloody serum was oozing through the skin.[2] In most of the cases death because of the aneurysm eventually took place, but in many, if not all, life was prolonged, so far as human judgment can determine, and equally important, there has been practically in all instances relief, or partial relief, from pain which was severe before the operation.

Much depends on the general state of the aortic wall. If the aneurysm is solely the result of trauma and the rest of the vessel-wall is healthy it can withstand the pressure of the blood-stream. Thus a patient reported by my chief of clinic, Dr. Beardsley, is now in my wards,[3] twenty-seven months after operation, without any disablement, dyspnea, dysphagia, or pain, and with no sign of aneurysm save a heaving impulse at the second and third left interspace in the midclavicular line. The growth has been entirely controlled. The aneurysmal sac in this case with the wire coiled in the clot is shown in Figure 1. In a patient (operated on by the late D.

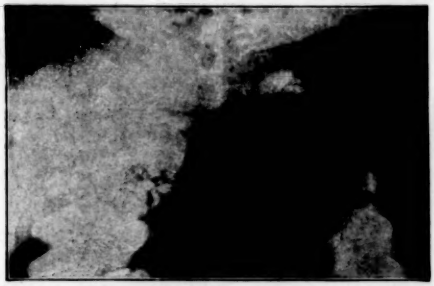

Fig. 1.—Aneurysm of the aorta, showing wire in the aneurysmal sac, two years after operation, with total arrest and no discomfort; from a skiagraph. (Case originally reported by Dr. Beardsley in *Therapeutic Gazette*, March 15, 1911.) Case 6.

D. Stewart) who was under my care for many months, although the growth projected nearly 3 inches from the chest, the patient lived in perfect health for three years, and died not from his aneurysm, but from pneumonia due to an alcoholic debauch. In this case the autopsy revealed the wire so firmly imbedded in organized clot that it could not be removed except by corrosion methods.

On the other hand, if the vessel-wall be severely and generally diseased the proposition is akin to an attempt to mend a piece of rotten rubber hose. Some time after it is supported in one spot, it gives way at another point. If the second point of yielding is so placed that it can be recognized and reached by the hollow needle used to insert the wire, it also can be supported, and in four cases I have done a second operation, and in one case a third, thereby preventing rupture at these points. In the latter case a fourth soft spot on the posterior wall of the sac gave way, and six months later caused death.

1. Since this paper was written I have operated on two other cases.
2. Pictures of two of these patients are to be found in Therap. Gaz., Jan. 15, 1900; of another, Jan. 15, 1903.
3. He is kept there for demonstration purposes.

Yet in this case the skin at each point of wiring when operated on was so thin as to be weeping bloody serum. The giving way of adjacent tissue when the first point of weakness had been supported is illustrated in Figures 2, 3 and 4.

While it may be justly asserted that the number of cases in which life is greatly prolonged is very limited, on the other hand, it must be borne in mind that the condition is, except in the rarest instances, invariably fatal and cannot be materially benefited by any other measures. Further, the condition is often unrecognized until the growth is very large and the patient's state has become desperate. Thus in the cases now reported for the first time the operation was refused until the symptoms grew so desperate that the patient was willing to resort to any measure. In one of them pulmonary edema was already well developed as a result of pressure and the patient died four days later of this condition, with the gain, however, of great relief from terrible pain from which he had suffered for weeks. The pictures of this patient showing the tumor of the chest during life,

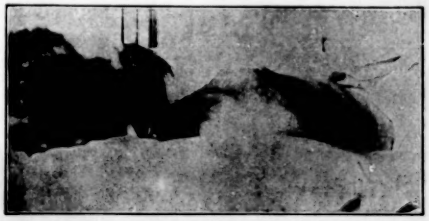

Fig. 2.—Aneurysm a few hours after wiring. The mass was less expansile and firmer than before.

Fig. 3.—Same patient as in Figure 2, showing how, the upper area having been consolidated by wiring and electrolysis, the sac developed a second point of yielding five days later.

and of the sac obtained at autopsy with the wire coiled in it, are seen in Figures 5 and 6. In another case operation was refused until after a lapse of two months the growth had tripled in size, large doses of morphin were needed to relieve the great pain, partial aphonia had developed, and expansile pulsation had extended for 6 inches down the vertebral column on the left side from the site of the original sac (Fig. 7). Here again the operation was performed as a last resort with small hope of cure and chiefly with the belief that the pain would decrease, which it did. Death took place twenty-eight days later from pulmonary edema, a not unexpected result as the left lung was already impaired by pressure at the time when the wiring was performed.

In another of these cases the patient absolutely refused to remain in bed, getting up several times night and day, beginning this breach of orders immediately after the operation, and thereby preventing the hardening and

fixation of the clot about the wire. In still another case, in which the growth had eroded the chest-wall and was very prominent,[4] through the error of an assistant the non-insulated shank of the needle came in contact with the skin, already distended and devitalized, and caused an electrolytic burn. This never healed, the slough extended and so weakened the sac-wall that death ensued because the clot was pushed out of the sac through this orifice. This result, however, did not take place for months, during which time the patient was well enough to travel and to get married.

The six unreported cases are as follows:

CASE 1.—A negro, aged 43, presented a large diffuse swelling in the mid-sternal line extending into the episternal notch and downward to a point 4 inches below. Laterally, the growth extended 2½ inches to each side of the median line. The sternoclavicular joint on the right side was dislocated. The growth did not give a bruit, an expansile pulsation, or a thrill. After excluding sarcoma by the aid of the *x*-ray, the operation was advised and refused. Three weeks later the patient returned with marked dyspnea, incessant cough night and day, and the signs of beginning bilateral edema. At this time the growth was far larger than before, and the patient was very hoarse. Two days were lost getting the needful

Fig. 4.—Same patient as in Figures 2 and 3, thirty-eight days later. The spot at which rupture threatened when operation was done is still firm, but the underlying growth has grown enormously.

wire. Figure 5 shows the patient just after the operation. Thirty-five feet of gold wire were passed into the sac through an insulated needle. Beginning with 5 milliamperes, the current was increased by 5 additional milliamperes every five minutes until 50 milliamperes were passing and then the current was gradually turned off. During the operation the patient, although forced to lie in an uncomfortable posture, expressed himself as largely relieved of pain without being prompted to do so by a question as to suffering. The growth also felt firmer and harder at the end of twenty minutes. For a few hours after the operation the cough decreased, and the pain was greatly diminished until death took place from pulmonary edema four days later. The result of the autopsy was the confirmation of the diagnosis of bilateral pulmonary edema and both vagi were found to be involved in the growth. The aneurysmal sac with the wire coiled in it and nearly all the clot removed is seen in Figure 6.

CASE 2.—A white man, aged 38, giving a long history of severe pain in the left arm, which had been diagnosticated as neuritis and treated with salicylates and heat, was found to have an aneurysm which had its greatest point of expansion posteriorly at the spot marked on Figure 7. There was a slight bruit and distinct heaving impulse at this point. The *x*-ray revealed a sacculated aneurysm of the latter part of the transverse and beginning of the descending aortic arch.

4. Therap. Gaz., Jan. 15, 1903.

There were no additional symptoms except severe pain. Here again operation was refused for two months and then called for as a last resort after the growth had greatly extended. The radial pulse in the left wrist was at that time almost, if not quite, absent. The left lung was dull on percussion along its posterior border in both lobes and the heaving impulse reached from the growth to the level of the sixth interspace in the para-vertebral line. The needle was inserted at the point marked in Figure 7, and 35 feet of gold wire introduced. Here again the patient, who was groaning with pain when the operation began, volunteered the information that the pain was less after the current had been passing for twenty minutes, and a little later, while the operation was being continued, he spoke jokingly about political affairs. The growth was now found to be distinctly firmer. Death followed from pulmonary edema in twenty-eight days. In this case the pain was decreased but not stopped, probably because the growth had already damaged the vertebræ in its downward progress. No autopsy was obtainable.

CASE 3.—W. K., aged 44, had a brother whose death was probably due to aneurysm, as he died immediately after feeling something burst within him. The aneurysm in this patient arose near the sternum on the right side at the third rib.

An *x*-ray examination showed a saccular aneurysm of the ascending arch. The pupil on the right side was larger than

Fig. 5.—Aneurysm of the ascending arch of aorta a few hours after wiring and electrolysis.

on the left. In the upper part of the chest to the right of the sternum was a distinctly visible pulsating area about 4 inches in diameter in every direction. The apex-beat was in the seventh interspace in the left anterior axillary line. There was a systolic bruit over the aneurysmal sac, but no difference between the radial pulses.

Ten feet of gold wire were introduced at 12:45 p. m. After the introduction of the wire the operation was delayed for half an hour because of trouble with the milliamperemeter. The current was gradually increased 5 milliamperes every five minutes until 50 were passed, when it was gradually diminished until it was stopped. Eight minutes after the current began passing, the needle was noticed to be moving less than before, and the growth when palpated was firmer. That night the patient said that he felt the wire in his chest and asked for something to make him sleep, as he felt nervous. He complained of backache, which he thought was due to the position he had occupied on the operating-table. The next day he felt better. It was impossible to keep him in bed, and he disobeyed orders continually, arising and going about. Thirty-seven days after the operation the patient seemed to be still improving, but had some discomfort because of the bandage across his chest. The following day he complained of violent pain in his right side. The respirations became rapid and shallow, the lips blue and the face pallid. At 5:50 p. m. the patient was seized with an attack of tumultuous heart action with staring eyes, and death occurred in twenty

V. 58
1912

minutes on the thirty-eighth day after the operation. In the cavity of the tumor was found the wire which had been introduced. The right pleural cavity contained 1,900 c.c. of blood-clot and 1,600 c.c. of serum, the sac having ruptured laterally into this space.

CASE 4.—A man, aged 54, had had pain under the sternum for several years. Six months before examination he had noticed a swelling coming from under the sternum which had eroded this bone and the second, third and fourth ribs on the right side and projected about 1 inch above the chest-wall. He attributed his difficulty to a kick on the chest by a pack-mule four years before. This patient was operated on on two occasions at an interval of a month and died eight

Fig. 6.—Saccular aortic aneurysm showing wire coiled in the sac. The specimen is split vertically and transversely and turned back. Most of the clot has been removed to show the wire. In the median line is seen the small opening in the aortic wall which communicated with the sac. From the patient in Figure 5.

weeks after the first operation and two weeks after the second, pressure on adjacent tissues causing pulmonary edema. He willed his body to me, and with the intention of having frozen sections made of the torso during the summer, it was placed in a large jar. No trace of specimen or jar could be found later, and it is supposed that some laboratory servant broke the jar and destroyed the specimen in order to avoid censure. The complete clinical notes were also lost.

CASE 5.—A white man, aged 40, had a large diffuse heaving tumor to the left of the sternum from the second to the fifth rib. There was expansile pulsation and a bruit. The growth developed some months after the patient had been thrown from a car, striking his chest on a stone. When told of the operation as a measure of relief he asked that it be done at once, as the pain was so severe that he would kill himself rather than submit to it any longer. There was also urgent dyspnea. Before the electricity had been passing fifteen minutes the patient volunteered the statement that his pain was much relieved. He was warned of the need of rest and after a month in bed took a journey of several hundred miles. He transacted a large business for several months lying on a couch, and then began going about. Two years and a half after the operation he returned and the skiagraph showed complete arrest of the growth. Six weeks later he suffered from a severe attack of influenza, developed pulmonary edema and died a little over two years and eight months after the operation. No autopsy was obtainable.

CASE 6.—This case has already been reported by Dr. Beardsley, who performed the first operation, in the *Therapeutic Gazette*, March 15, 1911. *Patient.*—A negro, aged 37, when first seen presented a large bulging mass over the second and third right interspace, which showed decided expansile pulsation and a loud continuous bruit. The *x*-ray examination revealed what was apparently a sacculated aneurysm of the ascending portion of the arch of the aorta. There was continuous pain in the right upper chest, occasionally shooting into the right arm and the right side of the neck.

Fig. 7.—Aneurysm of the transverse and descending arch. Cross indicates point at which greatest heaving and expansile impulse were noticed and where needle and wire were introduced. Case 2.

He was first wired Oct. 24, 1909 (18 feet of wire being used), the patient remarking that the pain was less shortly after the current began to pass. During the seven weeks he remained in the hospital at this time he complained of no discomfort or pain except after exercise. The patient presented himself at the Jefferson Hospital, nevertheless, on the day of his discharge from the Philadelphia Hospital, as he found himself unable to work and wished to escape the cold weather. We were also glad to have him for demonstration purposes. He had some cough at this time, and at the costal sternal junction of the third rib a pulsating mass was present, which was noted as softer in its upper portion, presenting also a blowing, systolic murmur. There were also some musical râles heard over both lungs. The systolic blood-pressure in his left arm was 115 as against 125 in his right. These symptoms became

temporarily better for a few days. A week later, however, the mass was found to be growing larger and seemed to be pointing at the place where the wire had been introduced. The pain recurred three weeks after admission and seven weeks after admission the mass was found to have greatly increased in size; the pain in the right arm had returned. Three months after the first operation I operated, choosing the point at which the tissues seemed thinnest and most yielding, and at which expansile pulsation was most marked. This is the only case in which during the operation the patient com-

Fig. 8.—Aneurysm of the ascending aorta and innominate artery treated by wiring and electrolysis. At autopsy, four months later, no trace of the wire could be found. The patient must have pulled it out. (This case has been reported in the *Therapeutic Gazette* for July, 1905, but without this picture.)

plained of discomfort and pain while the current was passing. Following the operation the patient was more comfortable for about ten days and then the tumor began to enlarge rapidly and the pain increased. The measurements of the mass at this time were 10½ cm. horizontally, and 8½ cm. vertically. Death occurred by rupture of the sac externally three weeks and four days after the second operation. This case is of interest because the autopsy showed that the sac which was wired and which ultimately burst was a false aneurysm, which had resulted from the escape of blood from a fusiform aneurysm of the aorta. Notwithstanding the fact that the history of the case as here detailed would seem to indicate that the patient was not greatly relieved of pain, it is nevertheless a fact that he repeatedly declared that he would gladly have the operation repeated because of the relief from the pain and distress which temporarily resulted therefrom. Possibly some of his pain was due to a second aneurysm about 8 inches below the first, which was discovered at autopsy.

In a case previously reported the growth involved the ascending aorta and innominate artery (Fig. 8). No picture of the patient has heretofore been published.

CONCLUSIONS

1. The fact that no accident has occurred in any of the twenty-two operations I have performed leads me to believe that this very radical operation is not a dangerous one, the more so as I have no knowledge of any accident having taken place when the operation was properly performed by others. In one unreported case, an attempt to wire a fusiform aneurysm of the carotid artery resulted almost immediately in hemiplegia, and in another unreported case the mistake of using the negative pole in the growth loosened the clot already present and caused multiple emboli.

2. The operation is the only one that offers material hope of prolonging life, this having been prolonged in one case at least five years.

3. It is justified by the prompt relief of pain which nearly always ensues and lasts, unless the growth, extending in another direction, creates a new source of pain.

4. The diagnosis of saccular aneurysm should always be confirmed by *x*-ray examination, as this operation is contra-indicated in fusiform aneurysm for obvious reasons.

5. Great care that properly prepared wire is employed is absolutely necessary.

Spruce and Eighteenth Streets.

V. 58
1912

THE SURGICAL TREATMENT OF ASCITES SECONDARY TO VASCULAR CIRRHOSIS OF THE LIVER

DESCRIPTION OF A SIMPLE TECHNIC *

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In ascites secondary to vascular cirrhosis of the liver, epiplopexy is indicated as soon as the internist makes the diagnosis. It is conceded that many of these patients will demand repeated tapping before they will consent to surgical intervention. Sinclair White[1] contends that operation is contra-indicated in cases of Bright's disease and should not be performed on patients over 55 or 60 years of age, or on patients in whom the total amount of urea is greatly reduced. Organic disease of the heart or lungs also contra-indicates operation. When marked jaundice, emaciation and bebetude appear, practically all surgeons agree that operation is contra-indicated. Recently, however, Dr. Crandall, visiting physician to the City Hospital, referred a patient suffering with ascites secondary to vascular cirrhosis of the liver, and although he was jaundiced, emaciated and in a very poor condition, epiplopexy was performed under local anesthesia with very good results. Occasionally such patients will

* From the St. Louis City Hospital.
1. White, Sinclair: Brit. Med. Jour., 1906, ii, 1287.

do well, but it is erroneous to offer them any hope at all. I believe that epiplopexy should be recommended in cases in which the ascites is due to luetic or alcoholic cirrhosis of the liver. In luetic cirrhosis the operation should be followed within two weeks with salvarsan administered intravenously. Turner,[2] however, holds that epiplopexy should not be performed in luetic cirrhosis.

OPERATIVE RESULTS

The operative mortality depends on the time of the surgical intervention, the operative technic, and the character of the anesthesia. Careful selection combined with local anesthesia will insure marked reduction in the operative mortality. If operation is performed before the patient's general health has been impaired, the results should be satisfactory in 90 per cent. of the cases. In 1904, Monprofit[3] collected 234 cases of epiplopexy. Eighty-four patients died within a month of the operation. At present, however, internists are referring these cases at an earlier date and the surgeons are enabled to

Fig. 1.—Peritoneum exposed and opened through a transverse incision.

show much better results. In nine of my recent cases there has been no operative mortality. Two of these patients were considered hopeless owing to the extensive changes in the liver. They lived eight and fifteen days, respectively.

TREATMENT

The omentum is utilized for the purpose of establishing vascular channels of communication between the portal and systemic circulation, since it seems especially adapted for the purpose. Morison sutured the omentum to the parietal peritoneum. Schiassi was the first to suggest the placing of the omentum between the peritoneum and abdominal muscles. Sinclair White opens the abdomen through a right rectus incision and then tucks the omentum between the rectus muscle and its posterior sheath. Mayo[4] makes an exploratory incision to determine the condition of the liver and then makes a second incision, 4 inches lower down, and follows the suggestion of White. If desired, the operation can be repeated on the left side. White regards epiplopexy as a formidable operation.

AUTHOR'S TECHNIC

Morphin and atropin are administered half an hour before operation. The peritoneum is exposed through a 4- or 5-inch median incision after the integument has been injected with a 0.1 per cent. solution of cocain or novocain. The posterior sheath of the right rectus is incised longitudinally near the inner border of the muscle and the latter separated gently from the posterior sheath. The procedure is repeated on the left side, after which the muscles are retracted and a transverse incision made through the peritoneum, care being taken not to cut the vessels in the round ligament. After having

Fig. 2.—Omentum held upward and lower lip of incision stitched to its base.

Fig. 3.—Omentum drawn downward and stitched behind the recti muscles and to upper lip of incision in peritoneum.

2. Turner: Brit. Med. Jour., 1909, ii, 1226.
3. Monprofit: Tr. French Surg. Cong., 1904.
4. Mayo: Keen's Surgery, 1910.

determined the condition of the viscera, the omentum is drawn through the incision and held upward by an assistant while the lower lip of the incision is sutured to the posterior surface of the omentum, care being taken to prevent wounding or including large vessels. The omentum is then drawn downward and tucked behind the recti muscles and round ligament. Several catgut sutures are necessary to retain the omentum in its new location. The upper lip of the incision is sutured to the omentum (see Fig. 3) and the abdomen is closed in the usual manner. In debilitated patients the linea alba should be overlapped.

REMARKS

The advantages of the technic are manifold. The more important are as follows:

1. Possibility of thorough inspection of the abdominal viscera.
2. Utilization of practically the entire surface of the omentum without disturbing the normal relation of the stomach and transverse colon.
3. Prevention of compression of the omentum between the muscle and its sheath.
4. Practical elimination of danger of postoperative hernia and intestinal obstruction.
5. Avoidance of injury to blood- and nerve-supply of the recti muscles.

4826 Delmar Avenue.

CONTRIBUTION TO THE SURGERY OF BONES, JOINTS AND TENDONS

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(Continued from page 990)

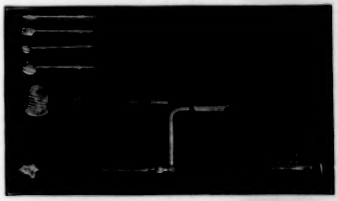
B. The repair of ununited fractures is one of the most important and practical fields for bone transplantation. It is unnecessary to consider here the causes of non-union, except to accentuate one fact that the *x*-ray brings out very clearly, namely, that non-union occurs frequently when the approximation of the bone ends is quite perfect and the fragments thoroughly immobilized, either with or without Lane plates or other external or internal supports. The *x*-ray shows in these cases that there is no osteogenetic effort on the part of the periosteum, medulla or compact bone tissue to span the gap with new bone. It is also a clinical fact that freshening, irritating, rubbing, wiring, or nailing these ends does not in a considerable percentage of cases stimulate the formation of an ossific callus. These failures are so numerous that a means more constantly and uniformly successful, without involving additional hazard for the patient, must be sought.

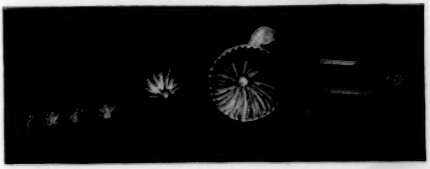
The means best adapted to meet these requirements, as I have demonstrated in a large number of cases, consists of the transplantation of the crest of the tibia from the same patient into the medulla, so as to span across the line of fracture. The medulla is reamed out with a reamer to the desired size and depth in the ends of both fragments. The transplant is then taken from the crest of the tibia of the patient and driven into one of the fragments to a degree sufficient to allow the other end to be inserted into the opposite fragment, so as to splint firmly and support the fragment across the line of fracture. The implant may be secured in this position by means of a bone or iron nail driven through it transversely.

The transplant forms a bridge over which the haversian vessels from the living bone at both ends pass over the gap and coalesce to form a callus, thus building new bone in the transplant.

I have not had a single failure of union in this class of cases, nor have I had to remove the transplanted fragment. If this work is done in an aseptic field and in an aseptic manner, and if primary union of the soft parts is secured, the result is uniformly good and the period of convalescence short.

The transplant (Fig. 9) should be of sufficient size to give firm mechanical support. Usually it is of the size of the adult index or middle finger, measuring about ⅜ by ½ by ⅝ inch, and of such length as may be desired. It must be firm enough to carry the necessary resistance. It should be removed from the crest of the tibia, and may or may not be covered by periosteum. The defect that is left in the tibia from which this graft is removed fills in rapidly, so that after from four to six weeks the site can scarcely be detected. A curved Buck chisel or Gigli or Butcher saw may be used to remove the fragment guided by my special retractor-guide. The transverse division of the bone above and below should be made with a saw before the fragment of bone is chiseled away from the tibia, because otherwise it is liable to split in a wrong direction. It should be lifted up carefully with forceps and placed in the bed prepared for it without coming in contact with any other material.





Figs. 7 and 8.—Side view and end view of the author's reamers of various sizes and shapes and the end mill used in securing the normal conformation of bones forming enarthrodial joints, such as hip and shoulder, and to ream out the medullary canal of long bones before the fitting in of the transplant.

It requires about forty to sixty days for the graft to become firmly attached and therefore an external cast should support the limb during this time. Although it feels firm to the palpating finger within twenty days, it must not be strained until ample time has elapsed for complete regeneration to take place. It requires from seven to ten months to have a bone fully restored to the normal size.

OLD UNUNITED FRACTURE OF NECK OF FEMUR

CASE 1.—*Patient.*—Mrs. C. V., aged 58, was admitted to Mercy Hospital, June 18, 1909. Family history was negative.

V. 58
1912

Patient had had scarlet fever, measles, whooping-cough and mumps during childhood.

Present Trouble.—In 1905 ,while stepping backward from a slowly moving car, she landed on her right foot and fell to the ground, striking on her right hip. She was carried home and an osteopath called, who told her that her hip was dislocated and proceeded to reduce it. No cast or dressing was applied. Massage was instituted and continued up to the present time. Five months after the injury the patient was able to get around with crutches, but walked with a decided limp. There was slight pain in the hip on motion and some stiffness in the knee. She could not cross the right leg over the left without manual assistance. There was no loss of sensation. On pressure, hip was slightly tender. There had always been an enlargement of the hip since accident.

Examination.—Right leg, 33½ inches; left leg, 35½ inches. Tip of right trochanter almost up to level of a line drawn at right angles to the body through the anterior superior spine of the ilium. Tip of left trochanter 2½ inches below this line.

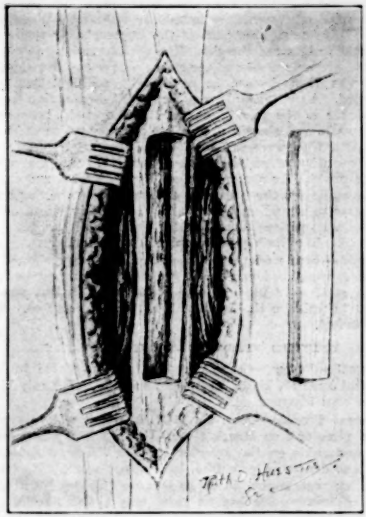


Fig. 9.—Exposure of crest of tibia, showing trough from which transplant was removed (transplant on right-hand side).

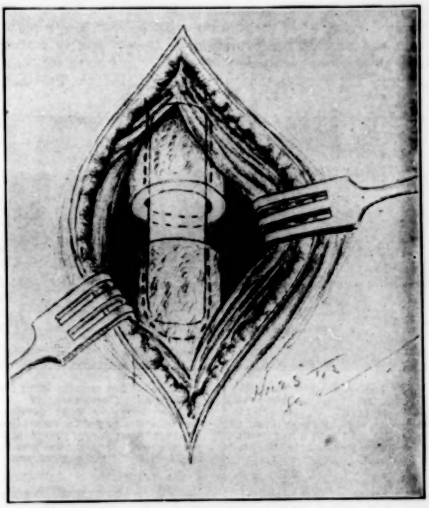


Fig. 10.—Transplant in place between ends of bones. The medullary canal is reamed out, the ends of the transplant shaped to fit, and the transplant fitted in tightly.

Arc of rotation greater in left than in right hip. In walking there is a drooping to the right side, despite a high heel. *X*-ray picture showed failure of union in old fracture of neck of femur.

Treatment.—At the operation a fracture of the neck of the femur was found, with a large mass of cicatricial tissue surrounding the head of the bone. There was no effort at bony union. The head was exposed, the fractured surfaces freshened down to the cancellated bony tissue, and two nails were driven from the external surface of the shaft through it and through the neck well into the head.

Result.—Primary union of soft parts and firm bony union. Function normal.

C. The replacement of bone for osteomyelitic infection presents features not considered in the previous section. There is usually a large sequestrum and a considerable suppurating area. This suppuration must be entirely overcome and the wound healed before transplantation can be done. If it occurs in the leg, and particularly in the leg of a growing individual, the entire shaft of the bone may be involved.

The length of the extremity can be maintained by implanting the head of the fibula at the knee under the epiphysis of the tibia. If the femur or humerus be involved, extension must be maintained until the sequestrum is freed (Figs. 11-14).

If the periosteum is retained, a foreign body, such as a tube or column of magnesium, ⅛ to ½ inch in diameter, should be inserted into the granulating wound and contact at both ends with the bone, even in the presence of infection. It will thus prevent the shortening. This is more desirable and applicable to a necrosis of the femur and humerus than in the case of disease of the tibia or either bone of the forearm. The magnesium will be entirely surrounded by granulation tissue. If the periosteum has not been destroyed by the osteomyelitic process, an involucrum of bone will form around the magnesium and the latter will ultimately be absorbed. Carbonated water, weak alkaline or mineral acid solutions (1 to 5 per cent.) may be injected to dissolve the magnesium after it has fulfilled its purpose, if it does not disappear after a reasonable length of time has expired. It usually is rapidly dissolved by the wound secretions with evolution of hydrogen gas.

When the sequestrum is removed and the space is covered with cicatricial tissue or skin, a fragment of bone from the crest of the tibia may be transplanted into the scar tissue at the site of the former bone. It must contact above and below or, at least, at one end with osteogenetic living bone denuded of its periosteum. It is preferable to have it contact with both ends.

A small contacting area may suffice to supply the haversian vessels with osteogenetic elements, as was beautifully illustrated in one of my cases. Here the contacting areas above and below were not larger than

the surface of an ordinary lead-pencil, and still there was supplied sufficient osteogenetic force for the full reproduction of the tibia to such an extent that it could scarcely be believed that it was a new tibia were it not for a hole that remains in the upper end and which is plainly to be seen in the skiagram (Fig. 13).

The periosteum over the living ends of bone must be removed carefully and the implant must be immobilized and firmly approximated at each end with phosphor-bronze wire, or any other non-absorbable material which would insure continued immobilization.

In tuberculosis of the shaft, a rare condition in this country, but a common one in Scotland, as shown by Mr. Stiles, the periosteum can be preserved, and preserved aseptically, as a rule. Here the bone can be reproduced fully without the implantation of a fragment of bone from elsewhere, but it will be evolved more rapidly and the conformation of the limb more perfectly maintained if a fragment of bone fills in the gap.

If bone is not accessible, then a bar, plate or perforated cylinder of magnesium may be inserted to maintain the normal conformation of the extremity during the process of evolution of the involucrum of bone around the foreign body. As stated before the magnesium will disappear in time, if it does not become infected.

Fig. 16.—An incision was made into the bone from the inner side so as to permit of straightening the bone without disturbing the opposite side. The magnesium plate was inserted to maintain separation.

Fig. 17.—Ten months after the operation. Correction of deformity, complete bony development in the gap and absorption of magnesium plate, except that portion imbedded in the muscle and outside of the periosteum.

In the removal of a tuberculous shaft in the child, the periosteum should be freed from the bone, divided crosswise, and the shaft evulsed from its epiphyseal attachment. *The epiphyses must never be disturbed in children;* therefore, the bone should be fractured on the shaft side of the epiphyseal osteogenetic line. The gap then remaining should be filled with some non-elastic compact supporting material during the period of regeneration. The rapidity of absorption of the magnesium can be seen in the cases in which it was used (Figs. 15-19).

IMPACTED FRACTURE OF THE INTERNAL TUBEROSITY OF THE TIBIA AND FRACTURE OF THE FIBULA

CASE 2.—*Patient.*—J. S., aged 62, was admitted to Mercy Hospital Feb. 3, 1912. Family history was negative. Patient had had measles, whooping-cough and typhoid when a child; no injury except that relating to the present trouble.

Present Trouble.—May 19, 1911, while the patient was standing between a telegraph pole and a slowly moving automobile, the running-board of the machine caught him on the inner side of the leg, just below the knee, jamming him against the telegraph pole. He did not lose consciousness, but could not stand on his leg. A physician was called immediately, and pronounced it a bruise without fracture. The skin was not torn. The patient was confined to bed for ten days, and had walked on leg, with aid of crutches.

Examination.—There was great deformity just below the knee, with every evidence of the fracture. The line of tibial fracture was from the level of the upper tip of the fibula downward and inward, so as to break its inner surface 1½ inches below the articular margin of the internal tuberosity. The internal malleolus of the right ankle was displaced inward 5 inches out of plumb.

Treatment.—An incision 2 inches long was made parallel to the long axis of the tibia and an inch to the inner side of the patellar tubercle. The tibia was completely divided with a Murphy-Buck chisel along the line of impaction. With the limb in a straight position, abduction was then made until the gap at the inner margin of the line of fracture was an inch in breadth. A magnesium plate 1¾ inches long, 1¼ inches wide and one-sixteenth inch thick was prepared and driven into a crease made by the chisel in the upper and lower fragments until it was entirely imbedded in the bone spanning the gap. This immobilized both of the fragments, prevented rotation and maintained the gap. The periosteum and fascia were sutured over the plate and the skin closed with horsehair. The limb was then dressed in a straight position, but hyperabducted. A plaster mold was then applied extending from the trochanter to the toes. The mold was opened at the end of three weeks and showed a complete primary union of the soft parts, but they were vaulted forward as though there were a large quantity of serum or blood beneath. On percussion it was resonant. An aspirating needle was inserted and drew off gas formed from the secretions decomposed by the magnesium, a regular result when the wound is completely closed and the magnesium oxidizes more rapidly than the hydrogen gas is absorbed. The limb was in splendid position.

Result.—Five weeks after operation the *x*-ray showed that the magnesium had practically entirely disappeared and there was a good bony union of the tibia. The patient was permitted to walk on the limb, with the aid of crutches. Result was perfect.

UNUNITED FRACTURE OF TIBIA AND FIBULA

CASE 3.—*Patient.*—M. S., aged 22, was admitted to Mercy Hospital June 19, 1909. There was no record of family history or personal history.

Present Trouble.—Aug. 26, 1908, a laundry stove exploded and a piece of iron struck the right leg midway between the knee and ankle on the anterior surface. The patient became weak and dizzy and perspired, but did not vomit. He tried to walk, but was unable to do so because "his leg bent" at the point of injury. He had no pain, only a numb feeling. He said that blood ran down his leg and that there were two holes on the inner side of his leg. Then he had sharp shooting pains. He was taken to a hospital and operated on the following morning; double wiring of both ends was done. He thought that some muscle was united and a piece of bone removed. His temperature rose to 100 F. He had pain in leg on motion only. The leg was put in a mold. Patient remained in hospital until Nov. 22, 1908. Six weeks after the accident a very successful skin-grafting operation was done on the leg. Patient said that there was no infection at any time. He was in bed only fifteen days, and one month before leaving hospital was walking on crutches. He had a circular cast on all the time, from time of admission to hospital until now. Cast was removed every two weeks and new one applied. He had pain in the leg for two or three days following the operation. In December wound reopened and patient went to bed. He was in bed twenty days; had no pain, but at night would get a numb sensation. He had hobbled around on crutches. Slight tenderness on pressure.

Treatment.—Patient was operated on June 15, 1909. There was no callus production in tibia. Approximation was good. Effort at bone production made from the periosteum around the wire and outward. Ends of fibula had passed each other, the lower to the inner side of the upper. Edges were fresh-

Fig. 11.—Destruction of the entire shaft of the tibia by osteomyelitis, the epiphyses and extremities remaining unaffected.

Fig. 12.—Three months after transplantation of a piece of the opposite tibia six inches in length. Beginning regeneration of bone.

Fig. 13.—One year after operation, showing almost complete regeneration of the shaft of the tibia.

Fig. 14.—The leg operated on is normal in size, shape and function. The foot is placed squarely on the ground.

Fig. 15.—Bowing of femur, result of injury to internal condyle, the bone development from that side of the epiphysis ceasing, but continuing on the other side.

Fig. 18.—Impacted fracture of upper extremity of tibia and consequent deformity of leg.

Fig. 19.—Refracture of tibia, correction of deformity and insertion of magnesium plate for retention of position. The magnesium was absorbed and the gap filled with bone. Perfect result.

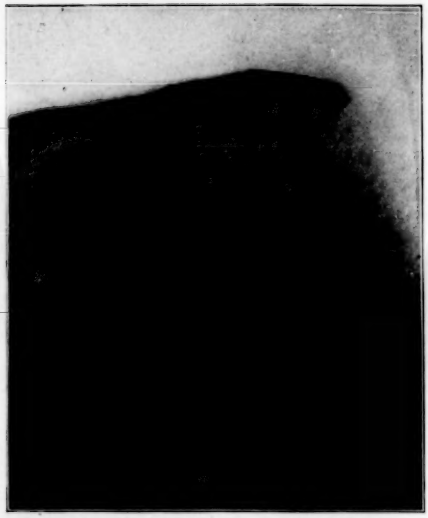


Fig. 20.—Fracture of the anatomic neck of the humerus with dislocation of the head of the bone into the subglenoid space.

Fig. 21.—Replacement of head of bone into glenoid cavity and fixation of head to shaft by means of a wire nail.

Fig. 22.—Four months later. Nail removed, sutures in situ; regeneration of bone complete, with return of function in joint.

Fig. 23.—Fracture of neck of femur with separation of head, seven weeks after injury. Owing to separation of head from source of nourishment it was dead but aseptic, so that it could be used to bring about the formation of a new head. The globular mass in the center of the picture is the head of the femur. The shaft extends behind and above it.

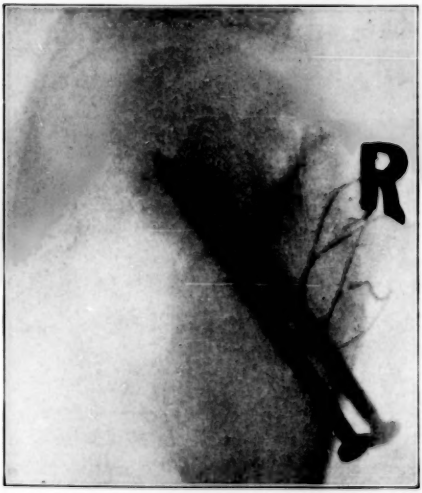


Fig. 24.—Head nailed to femur after reposition of fragments.

V. 58
1912

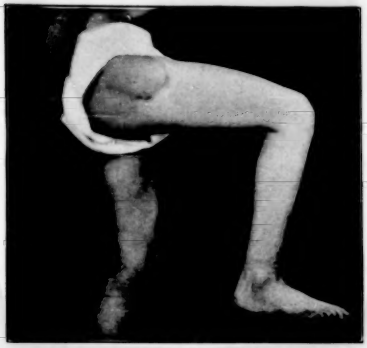


Fig. 25.—Regeneration of head of bone, with perfect restoration of function, showing that the dead but aseptic head met all requirements of a transplant. Flexion and extension normal. Leg can be rotated naturally.

Fig. 26.—Old fracture of anatomic neck of femur. Absorption of bone and non-union. Four months after operation. A portion of the greater trochanter was removed and nailed to the femur to make a new head. The result was perfect. A firm bony union took place with restoration of function in the hip.

Fig. 27.—Cystic fibroma of upper third of humerus.

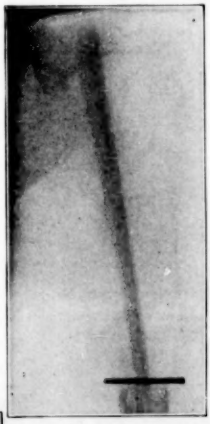


Fig. 28.—Entire upper third of humerus removed and tibial transplant inserted with nail locking it in place. Upper end of transplant was sutured into capsule with the idea of securing a restoration of auricular surface of humerus.

Fig. 29.—One year after the operation, showing regeneration of upper third of humerus, including the tuberosities and articular surface.

Fig. 30.—Showing full extension of arm.

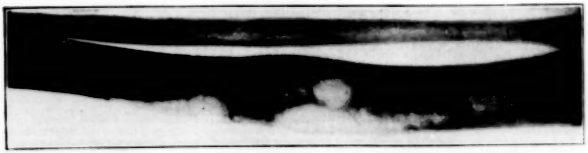


Fig. 32.—Boy, aged 13, with osteitis fibrosa cystica of shaft of right tibia.

Fig. 31.—Showing complete flexion and ability to place hands on head.

Fig. 33.—Three weeks after resection of tumor and transplantation of 8¾ inches of patient's well tibia into the gap. The transplant is held in place above and below by wire nails.

Fig. 34.—Seven months after operation, showing regeneration of bone, except at lower end of transplant, where a necrosis occurred, probably from the irritation of the nail. No return of neoplasm.

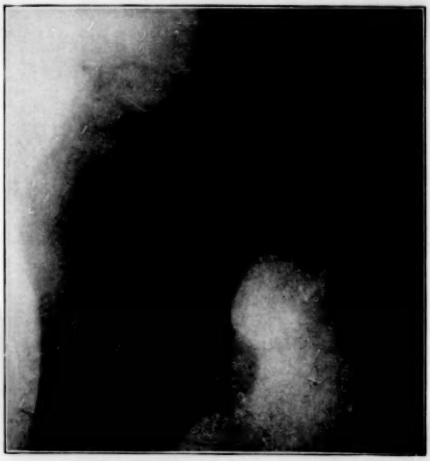


Fig. 35.—Chondrosarcoma of femur involving great trochanter and upper surface of the surgical neck.

Fig. 36.—The entire extremity of the femur, including a portion of the shaft, was removed and a piece of tibia about seven inches long implanted, the upper end being placed into the acetabulum and the joint capsule sutured around it. The fragment fractured at its upper end during its removal from the tibia. It was wired, nailed as shown and implanted. This picture was made four months after the operation. On palpation there seems to be considerable regeneration of bone. The skiagram shows ossification for three-fourths of the entire length, but not so far advanced.

Fig. 37.—Condition of bone after removal and splitting. No apparent involvement of head by tumor process.

V. 58
1912

ened of both tibial and fibular fragments, and approximation secured by the use of bronze wire. No union resulted.

He was admitted to our service Oct. 6, 1909. There was no ossification; slight callus production; apposition perfect. Bones were spread out, connective tissue removed from between them and ends of bones freshened with chisel and all cartilaginous and fibrous tissue removed.

It was planned to make an intramedullary transplantation from the left tibia. The left tibia was exposed and two holes were bored through and nails inserted in these to steady the bone for sawing. A portion of bone was thus removed from the crest of the left tibia, measuring about one-half by five-eighths by three-eighths, and about 3 inches long. The medullary cavity of both the upper and the lower fragment was reamed out and the transplant from the left tibia was driven into the lower end first, then the upper end was inserted and a nail placed into the implant transversely to keep it from being displaced on motion. The wound was closed with catgut. No drain. There was primary union in both the right and the left tibiæ. Skiagrams were made repeatedly and showed the progress of ossification of the implant and of ossific union of the ends of the bone. An elongation of the tendo Achillis had to be made on account of the contraction that had taken place in the gastrocnemii during the long illness.

Result.—Perfect recovery, with full restoration of function.

FRACTURE OF TIBIA AND FIBULA; NON-UNION

CASE 4.—*Patient.*—H. P. W., a man aged 32, was admitted to Mercy Hospital Dec. 27, 1911. Family history was negative. Patient had been a civil engineer in the Canal Zone. He had tropical dysentery in 1908, and malaria for past ten years.

Present Trouble.—June 9, 1911, was in railway wreck and his tibia and fibula were crushed, resulting in a compound comminuted fracture with division of anterior tibial artery. A purulent discharge started on the third day and continued for fifteen days, when the external wound was entirely healed. Temperature ranged from 100.6 to 102 for first three days. Otherwise there was no constitutional disturbance. The leg was placed in a mold on the fifteenth day. *X*-ray picture taken the next day showed an overriding of both bones, with angulation of 45 degrees. No extension was put on. The mold was removed in four weeks. There was slight motion at the site of the fracture. Another mold was applied and left on for a month. The patient walked on crutches six weeks after the accident. When the second mold was removed the callus was a little more solid, but there was still some motion at the fracture. A plaster-of-Paris collar, 12 inches wide, was put on round the fracture and left on for three weeks. During this time he used crutches. The collar was removed. After two and one-half months a second *x*-ray picture was taken (December 5) and showed an overriding of one and one-half inches, with considerable mobility at the line of fracture. This mobility had increased slightly up to the time of admission.

Examination.—This showed a non-union of the tibia. Four *x*-rays of this case showed how important it is to have the pictures taken from various angles. One showed an apparently excellent union; the second a fair union; the third almost failure of union, and the fourth a complete separation of the two fragments by an interposed cartilaginous or fibrous mass. The fibula was united. There was a slight external angulation at the site of fracture.

Operation.—An incision 4 inches long was made over the anterior surface of the tibia near its lateral margin. The line of fracture was exposed. A fibrocartilaginous mass was deposited between the ends of the bones; there was no effort at bone reproduction. A groove one-half inch wide and 3 inches long was chiseled through the anterior surface of the tibia down to the medulla, intercepting the fracture at its middle. The reamer was then used to free the medulla one-half inch above and 1 inch below the groove. The tibia was then ready for the implant. A transplant 4½ inches by one-half by one-half by five-eighths was removed from the crest of the opposite tibia with the chisel in the regular way. It was driven into the lower fragment until the upper end of the transplant could be depressed into the groove in the upper fragment and admit of the insertion of the upper end into the medulla. It was then driven upward into the medulla beyond the end of the groove, so that the transplant locked. At the completion of this the leg felt strong enough to walk on it at that moment, so firmly did the transplant fix the end. The periosteum was then closed over the graft with catgut and the skin closed with horsehair. A plaster mold was applied, extending from toe to 8 inches above the knee. Primary union resulted.

The mold was removed at the end of three weeks. The implant had healed in nicely. The mold was reapplied, and removed at the end of five weeks, when the *x*-ray showed that a bony union had taken place. A leather mold was then substituted for the plaster mold and the patient was allowed to place some weight on the limb and walk with crutches. End result was perfect. (Figs. 43-45).

Tuberculosis of the shaft of the bones is a disease of childhood and infancy, and in this country rarely a disease of boyhood or girlhood or adolescence. In the adult the tuberculous disease is an epiphyseal lesion, while in the child and infant it is a diaphyseal or, as Mr. Stiles terms it, a metaphyseal lesion. Of course, it is hardly necessary to say that preparatory to carrying out any of these measures in these cases, either human or bovine tuberculin should be used to effect immunization, the type of the tuberculin depending on whether the infection is human or bovine.

In all of these cases (a) it is desirable that the sequestrum be removed early and completely; (b) also that the infected shaft be removed before a mixed infection of the periosteum takes place; (c) the epiphysis must never be disturbed in the case of children; (d) the normal conformation and length of the limb must be maintained either by internal or external mechanical supports or by extension; (e) the joints above and below the infected zone must be controlled carefully so that no deformity will result during the inflammatory process of destruction or during the period of restoration and repair, as these articular deformities are often more detrimental to the patient than the primary lesion. *Over this we have practically complete control if we take the necessary precautions early.*

D. In fractures of the neck of the humerus there frequently occurs luxation of the head out of the glenoid cavity and before union can be restored one is often required to detach the head completely and replace it in the glenoid cavity. In these cases it becomes necessary to separate it entirely from its vascular supply. It then becomes a graft as the fragment always dies and is replaced by new bone.

In this treatment the head is removed from the subglenoid space, brought out on the table, the end of the fragment is freshened, and accurately applied over the head. It is secured in this position by one or two eight-penny nails, driven through the humeral shaft into the head by an ivory peg, or a bone peg may be taken from the tibia and used in place of the nails. I believe that the wire nails fill all of the indications and meet all of the requirements in these cases. This gives a positive contact for transmission of the osteogenetic elements from the neck into the head.

The bone rapidly regenerates from the neck side and the head retains its full shape and size (Figs. 20-22).

FRACTURE OF SURGICAL NECK OF HUMERUS WITH LUXATION OF HEAD AND NON-UNION

CASE 5.—Mrs. M. K., aged 19, was admitted to Mercy Hospital Sept. 10, 1911. Family and personal history negative.

Present Trouble.—June 29, 1911, patient was thrown from an automobile. She did not know how she landed or whether she was unconscious. She was lying on her right side, with her arm under her, and was assisted to her feet by being picked up under both arms, when she felt a pain in the right shoulder-joint which increased on motion. She had shooting

pains down the arm. After the accident the arm was put in a De Sault splint and a diagnosis made of dislocation. This was changed later to fracture of the neck. An *x*-ray picture taken a week later was said to show nothing (showing how dangerously misleading a defective *x*-ray may be). The arm was left in the original position for three weeks, when passive motion and massage were begun. The patient could now abduct the arm and had some deltoid motion, but could not raise it with the elbow flexed.

Examination.—Skiagram showed fracture of the neck of the humerus with displacement of the head out of the glenoid cavity into the subglenoid space. On examination it was found that the patient could abduct the arm 4 inches from the body, as she had some deltoid motion, but could not raise it with the elbow flexed.

Treatment.—Under ether anesthesia the shoulder-joint was opened by an incision 5 inches long, parallel to and in the anterior portion of the deltoid. The glenoid was freed from the remnants of the capsule and the cartilage exposed. The head of the humerus was then freed from its attachment in the luxated subglenoid position and brought out on the table. The fractured end was freshened and it was prepared for replacement in the glenoid. The fractured edge of the humeral neck was then freshened so that the cancellated tissue clearly showed. The head was then replaced in the glenoid cavity and nails were driven through the humerus well into the head. The first skiagram showed the bloodless head in position, and the second skiagram showed the head fully regenerated. There was primary union, and motion is rapidly returning. The joint is practically painless. Excellent result.

The head of the femur may also be luxated or, when separated from the neck, it may become necrotic through its retention and the separation or strangulation of the ligamentum teres. In the secondary operation it should be managed as above. As in the humeral separation, the head should be retained or replaced in the acetabulum and secured there either with a bone peg or two wire nails, which I prefer.

As shown in one case (Figs. 23-25) full regeneration of the head takes place without ankylosis of the joint following. In this case the time that had elapsed between the date of the injury and the operation was seven weeks. The head of the bone had been necrotic for that period, still its haversian canals acted as transmitting tubes for the osteogenetic capillaries coming from the living end of the neck of the femur. This forces me to the belief that a dead aseptic head of the femur from another individual might be transplanted into the acetabulum and grow, as it has in this case. The practical clinical test and demonstration of this belief, however, is left for the future.

When the head of the femur has been destroyed by absorption, due to its separation, with a fracture of the pelvis, as is shown in Figure 26, it can be reproduced by excising four-fifths of the trochanter with its cartilaginous ligamentous cover and as much of the external margin of the shaft as is necessary to fill the vacancy left in the neck of the bone. This trochanteric fragment can be nailed to the freshened end of the neck with the nail-head pointing toward the articulation. If it remains aseptic, regeneration of bone will take place through and into the transplanted trochanter, and the latter will make an excellent head. This was demonstrated in the case mentioned above (Fig. 26). This man can now place his entire weight on the new head; he can lift his leg and extend it horizontally at right angles to the body, when in a sitting position, which he could not do before the operation. This case also supports my belief that a new head may be transplanted from an aseptic cadaver.

The trochanter may be used in the same manner in the reproduction of a head for the humerus, in cases in which ankylosis exists, or in which the head has been destroyed by disease or injury.

The earlier these operations are performed, the better the results should be, as but little shortening will have taken place before the operative procedure is instituted. This favors a speedy full restoration of motion and function.

FRACTURED PATELLA

CASE 6.—*Patient.*—J. D., a man aged 48, was admitted to Mercy Hospital, Dec. 25, 1910. His mother had had carcinoma of nose. Patient had had scarlet fever at 18, typhoid at 29, and frequent attacks of acute articular rheumatism, last attack being at age of 40.

Present Trouble.—April 16, 1910, patient received an injury on his left knee, being struck by a door. The knee showed all evidence of a contusion and he could not walk away from the scene of the accident, but had to be carried, on account of the weakness of the knee and inability to control flexion and extension. On examination, a transverse fracture of the patella with a median fragment was palpable. As soon as the swelling disappeared from the knee, a posterior splint was applied and the fragments drawn into apposition by means of adhesive. For the following eight months the knee was kept perfectly at rest by means of posterior splints for the first eight weeks, after which a leather case was applied and the patient allowed to go around on crutches. On December 5 the leather case was taken off. There was a very little amount of flexion of the knee. December 9, 1910, while walking, he felt something tear in his knee and he gradually sank to the sidewalk. After this he could flex the knee, but with considerable pain. Examination showed the patella to be refractured in the old place. Since then the knee had been kept perfectly at rest.

Examination.—This showed a transverse fracture of the left patella with a large upper fragment, a smaller lower fragment, and a small median fragment. The leg could not be flexed. There was no effusion in the joint.

Treatment.—Dec. 27, 1910, the knee-joint was injected with 20 c.c. of a 2 per cent. dilution of liquor formaldehydi in glycerin (it had been mixed more than twenty-four hours). It was then placed at rest in extended position, a 15-pound Buck's extension being applied. This was kept up for seven days.

Operation.—Jan. 3, 1911, Esmarch bandage applied. An incision 8 inches long was made, beginning at the lower end of the patella and extending up over its mid-line and over the midline of the quadriceps tendon. It extended down to the bone and to the fibrous surface of the quadriceps tendon. The fibrous tissue and cartilaginous surface of the fractured edge of the patella were all removed, and the edges of the fibrous capsule elevated clear across the transverse surface of the patella and for three-fourths inch to either side of the fractured angles. The ends of the bone could now be drawn into apposition with the assistance of heavy catspaw retractors. A strip of quadriceps tendon, three-fourths inch wide and 5½ inches long, was then elevated from the middle of the quadriceps tendon with its patellar attachment retained. The aponeurosis of the patella was sutured all across and on both sides of the patella, with phosphor-bronze wire suture, so the bone came into good apposition. This flap of tendon was reflected downward, its end split up for 1½ inches, and both fragments drawn through a split in the tendon patella, and then one-half twisted around to the right and the other half to the left of the divided portions of the patellar ligament, and both ends united across the front of the patellar ligament below the split, locking firmly in it. This tendon flap was the same as I used to supplant the patella when I removed it for tuberculosis in 1904, and frequently since. It gives an ideal support to the patella after fracture, and it is so easily applied. The slit in the quadriceps tendon was closed with catgut suture.

This is a very effective means of supporting the patella, particularly in old cases.

Primary healing and good recovery resulted.

V. 58
1912

BOWING OF FEMUR

CASE 7.—*Patient.*—D. S., a boy, aged 16, was admitted April 20, 1910. Patient's father died at 58 of paralytic stroke; family history was otherwise negative. Patient had chickenpox at 8; no other acute diseases.

Present Trouble.—When 3 years old, while trying to steal a ride on a wagon, the patient stuck his left foot through the spokes of the wheel and was thrown to the ground. The wagon passed over his left knee. He was unable to rise and was immediately taken to a hospital, where it was said that his patella was fractured. The leg was flexed on the thigh and could not be straightened out. The patella was removed and splint applied, with extension. The patient remained in the hospital for three or four months. On leaving he could not put his foot on the ground, and could walk only with crutches. The leg was straight, shorter than the right leg, but not painful. He finally discarded the crutches and then his leg began to bend, or bow, outward at the knee. Three years later another operation was performed and plaster mold applied for two months, and when it was removed the patient could walk without the crutches. About three years afterward his leg again began to bow outward at the knee, and at the end of the fourth year he was again removed to the hospital and operated on. The plaster mold was left on for three or four weeks. He then went home with his leg straight and he could walk without crutches. The leg was stiff, but not painful. Gradually it again bowed outward at the knee, and in four years the patient returned to the hospital for a third operation. The plaster mold was left on for five weeks. When it was removed he could walk, but the leg was stiff. It remained straight about three years. About eighteen months ago he was struck on the knee by a piece of coal weighing 20 or 30 pounds, falling from a height of about 4 feet. The patient walked home. The next day he had an aching pain in his thigh and hip which bothered him for about a month. When he began to walk again he noticed that the leg was gradually bowing once more. He had no chills, fever or sweats.

Examination.—There was an outward bowing of the knee, with an abduction of the leg and some rotation inward of the toes. The knee was in a state of complete bony ankylosis. This patient was under my care during his original treatment at the Cook County Hospital. There was then a compound fracture of the femur with a destruction of the inner half of the lower epiphyseal line, taking off a part of the internal condyle and a part of the shaft. The bowing which occurred subsequently is a beautiful illustration of the effect of the removal of a part of the epiphyseal line so early in life. The femur grew in length in its outer half, where the external condyloid epiphyseal line was intact, but did not grow at the inner condyle. This caused a recurrent abduction of the leg and bowing out at the knee. The internal malleolus was 7 inches out of plumb when he appeared for operation. Considering the patient's age it may be assumed that there will be little if any further growth in length of this femur.

Treatment.—I made a complete transverse division of the femur through a longitudinal incision just above the internal condyle, using a thin flat Buck chisel. The bone was divided and fractured. It was hyperadducted, so that there was a gap in the bone three-fourths inch wide at the inner extremity, which was the seat of the greatest bowing. A crease was chiseled in the bone upward and downward for the insertion of the magnesium plate, which measured 1¼ inches in width and three-sixteenths inch in thickness. This plate was driven into the crease, so that it spanned clear across the line of fracture. It was driven down to within one-sixteenth inch of the level of the bone. This firmly fixed the fractured ends, preventing lateral or anteroposterior displacement. The deep tissues were approximated with catgut, and the skin with horsehair. Primary healing occurred and primary bony union.

Result.—The last skiagram made in this case shows that the magnesium plate was entirely absorbed except that portion which was extra-osseous. Here some of the plate is still visible. Perfect bony union has taken place.

E. The restoration of bone removed for non-malignant neoplasms, such as osteofibrosis cystica, hemorrhagic cysts, myeloma, etc., has also been accomplished successfully. The bone should be removed for a sufficient extent, with or without its periosteum, depending on one's ability to make a diagnosis from the gross appearance as to the probability of malignancy. If the periosteum can be preserved, regeneration of bone will always take place, but the conformation of the limb and the speed of reproduction and restoration of usefulness of the extremity are greatly facilitated by the implantation of a fragment of bone from the crest of the tibia. Where the periosteum is removed, it is essential that the implant contact with the living bone at least at one end, so that osteogenetic living elements can pass over into the transplant.

The best plan is to implant the fragment into the medulla and to prevent its penetration to a deeper degree than that desired by blocking it with a nail placed transversely, as has been mentioned previously. If the articular end of the bone has been removed, one end of the transplant should be inserted into the capsule and relieved from pressure by an extension until such time as a soft callus or a mass of fibrous tissue has formed about the implant to fix it. The muscles should then be sutured around the implant in their normal anatomic position. In one case (Fig. 28) 7½ inches of the shaft of the humerus with the epiphyseal line and articular end were removed.

By studying the radiograph (Fig. 29) one can observe the stages of reproduction very well. At the end of five weeks, on palpation, the humerus appeared to be as large as a normal humerus, although the *x*-ray showed small calcareous deposite only here and there. The development of compact bone proceeded along definite lines — from extensions of the periosteum, from the medulla, through the implant, up to the capsular attachment and into the joint, as shown in the last *x*-ray picture taken nine months and some days after the operation.

Here also can be observed the evolution of the tuberosities at the points of muscular fixation. Again, it will be noted in Figure 29 how the transplanted periosteum remained as a white line for seven months after the implantation, and that it was an apparent detriment to the production of bone. It was finally involuted by bone formed from the new periosteum around the newformed callus.

This shows how completely the humerus can be regenerated and how perfectly function of the extremity can be restored in cases in which formerly amputations were made. This patient does not know from anything, except her inability to lift her arm up close by the side of her head, in an extended position, that any operative procedure has been performed on her. This case shows how completely a new bone may be produced in a transplant, and how it enlarges to meet the anatomic and functional requirements.

In the case of my associate, Dr. Golden (Figs. 32-34), it will be seen that ossification commenced from the upper end and that there was a small zone of late infection at the lower end around the nail. Some absorption has taken place at the site of the infection so that osteogenesis in this case must come entirely from the proximal attachment, because of the gap present at the distal attachment. It has extended down now within half an inch of the lower fragment as shown by the dark color in the *x*-ray made seven months after the operation. In this case Dr. Golden took a fragment, nine and a half inches long, from the opposite tibia and implanted. This case also shows that an infection may take place at one end and not spread throughout the entire bone.

The infection, however, did not show itself until about three weeks after the operation, and then only a very circumscribed accumulation of seropurulent material made its appearance at the point where a nail was placed.

In the myeloid tumors excision of the diseased area well above and below the neoplasm should be the practice, and a bone fragment should be inserted to fill the gap. The same line of treatment is applicable in the case of hematogenous cysts, as these are occasionally infected and it is not safe to resort to curettement and implantation of a fragment of bone.

In septic osteomyelitic cavities fragments of bone should not be used for filling material unless the cavity is rendered absolutely sterile, and of this one can never be certain, except as the subsequent course of the disease may indicate. The aseptic blood-clot of Schede will give as good results as the implantation, if asepsis is attained. The bony canopy of the osteomyelitic abscess should be retained, attached to the periosteum and soft tissues after the plan of Tillmonns and depressed into the cavity at the completion of the operation.

F. For malignant disease of bone, such as giant-cell sarcoma, large spindle-cell sarcoma, encapsulated chondrosarcoma and circumscribed intra-osseous sarcomata, the bone and periosteum can and should be removed for a considerable extent above and below the malignant focus. A fragment is then implanted to fill the gap. We know that a giant-celled sarcoma can be removed by a local operation and the patient survive without local or constitutional recurrence for years. We also know that the same thing is true, in a smaller percentage of cases, however, in the case of chondrosarcoma. In a still smaller percentage of cases the removal of a spindle-cell sarcoma by a local operation without an amputation can be accomplished and the patient live for years without recurrence.

This has led me to hope that the early removal of these neoplasms while they are still circumscribed and encapsulated should give good results. The bone can be removed to a considerable extent with its periosteum, with its musculotendinous attachments, and still an excellent functionating extremity be preserved. With this operative outlook early operation will be conceded by the patient, whereas early operation is practically never conceded when amputation is suggested.

In the case of Mr. N., I removed 5½ inches of the upper extremity of the femur for a chondrosarcoma of the trochanter, which originated from a trauma received two years previously. The *x*-ray picture showed that the sarcoma involved the trochanter and a portion of the neck and of the shaft for a considerable length downward. The trochanter, neck head and shaft with its immediate muscular attachments, were all removed, as is shown in the skiagrams (Figs. 35-37).

A fragment of bone, 6 inches in length, was taken from the opposite tibia, and inserted into the medulla of the femur at the distal end and the proximal end was inserted into the acetabulum and surrounded by the capsule. A nail was driven through a hole in the fragment to which the muscular attachments could be fixed, thus preventing motion of the fragment and at the same time securing the future function of the leg. Later, when pressure was put on, the bone split at this point. The fragments were immobilized by a circular wire and catgut ligature. The muscle ends were drawn around the shaft in various positions approximating as nearly as possible their normal location. The wound healed *per primam*. Extension was applied to maintain the full length of the thigh during the process of regeneration.

The skiagram (Fig. 36) shows the evolution of bone from the medulla and from the periosteum of the living bone, making a bony involucrum around the soft callus.

In eight weeks the upper end of the femur, judging by external manipulation, appeared to be of full size. The skiagram, however, showed only here and there bony deposits. Regeneration is taking place, as can be seen in the most recent skiagrams taken three months after the operation, between the split fragments and well up into the acetabulum. The patient is going about on crutches and suffers but little pain. He is not permitted yet (3 months after operation) to put any weight on his leg.

The extensions were removed at the end of three months. It appeared to me after operating in this case that it would have been a good plan to use bones from the embryo to surround the compact bony tissue that was taken from the patient's tibia, because this might stimulate regeneration or act of itself in the reproduction of bone.

(To be continued)

VOLUNTARY SUBMISSION TO TREATMENT AND CUSTODY IN HOSPITALS FOR THE INSANE *

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The lunacy laws of some states — and particularly the District of Columbia — are strikingly deficient. While the makers of these laws manifestly knew little of the needs and condition of the unfortunates for whom they sought to provide, the fault must not be charged in whole to them. These legislators acted in accord with the then existing views of the people, and, we may assume, in response to the dictates of their own best judgment. But the knowledge of the people at large on this subject, and that of the legislators in particular, was vague, and the whole face of the problem was charged and surcharged with doubt and suspicion. In place of actual knowledge, there were the long existing traditions that the insane were "mad," that they could be cared for only in strong rooms under constant restraint, and that their very presence was to be shunned as full of danger. Moreover the prognosis of the layman was always very positively unfavorable, and the possibility of a complete recovery never seriously considered. Public knowledge, however, and the sentiment which is its outgrowth, have increased in late years in wonderful degree.

The open methods more recently employed in the management of hospitals for the insane, the publicity concerning such institutions incident to the inspections and reports of lunacy commissions, the activities of boards of charities charged with the care and maintenance of insane persons, and the more intimate professional association of medical men in private practice with those conducting hospitals for the insane, are some of the factors which have brought about an enlightenment of the public. And so it happens that the people are coming into possession of actual facts and laying hold on new beliefs concerning the temporary detention, the early care, the adjudication and court hearings, and the custody and treatment of the insane. The ignorance of the past is giving way to intelligent understanding

* Read before the Society of Nervous and Mental Diseases, Washington, D. C., Feb. 15, 1912.

V. 5
1912

and the wild traditions long held by men are being superseded by an appreciation of the condition and requirements of the man who is mentally sick. The medical profession has led in this progressive march. In no field of medical science has there been so much advancement in the past decade, in proportion to the development prior thereto, as in that of psychiatry. More and more has the profession, by its activity and its achievements, emphasized the true hospital conception of the problems connected with the insane.

In some jurisdictions this broader and more intimate familiarity with the subject has borne fruit as evidenced by radical changes in the lunacy laws. In other jurisdictions—including the District of Columbia—there must be more agitation, more well-founded criticism to bring about the needed amendments and corrections. These changes must come; their coming will be hastened in the proportion of the degree of earnestness of the public's demand. It is in the hope of assisting in this general demand that I call attention to one of the most beneficent provisions of law ever written on any statute books. I refer to the plan of voluntary or self-commitment of the insane. Some states have for several years had such a provision of law; others have but recently adopted it.

One of the earliest self-commitment statutes was passed by the legislature of Maryland. It is recorded as Section 38 of Chapter 487 of the Public General Laws of 1886, and provides that:

> Any person believing himself to be mentally diseased and approaching a state of insanity and being advised by his attending physician that such is his condition, may voluntarily commit himself to any lawfully authorized institution for the insane to be detained for the time specified by written agreement, signed by such person in the presence of a friend or relative or any disinterested person and by his attending physician, for a period not exceeding three months; said contract may be extended by renewal; but if, at the expiration of the period of contract, such person should be insane and unfit to be discharged in the opinion of the medical superintendent, the lunacy commission shall be duly notified in writing of the facts and said commission shall investigate the same, and if, in their opinion, such person is unfit to be discharged, then and in such case said commission shall be authorized to renew the contract by their own authority for one month at a time.

Ever since the enactment of this legislation, self-commitment in Maryland has not only been lawful, but it has been steadily practiced.

In Rhode Island voluntary commitment to the Butler Hospital has been permitted since the passage of the act of 1893, Section 41, Chapter 1192 of which provides that:

> The superintendent or keeper of any hospital except the State Asylum for the Insane as aforesaid may receive and retain therein as boarder and patient any person who is desirous of submitting himself to treatment and makes written application therefor, but whose mental condition is not such as to render it legal to grant a certificate of insanity in his case; no such boarder shall be detained for more than three days after having given notice in writing of his intention or desire to leave such hospital.

In 1896, this section was amended and became Section 41 of Chapter 82, and in 1902 this law was amended by Chapter 990 of the Public Laws, Section 2, by omitting the words referring to the State Asylum for the Insane.

As will later appear, many patients have been treated under the provisions of this act.

Very similar to the Rhode Island law is that of Illinois, designated as Section 37 of Chapter 85 of the Revised Statutes of Illinois (1909):

> Any person who may be in the early stages of insanity who may desire the benefit of treatment in a state or licensed private hospital for the insane as a voluntary patient, may be admitted to such hospital on his own written application, accompanied by a certificate from the county court of the county in which such applicant resides, stating that such person is a private or county patient, as the case may be, and such person shall, if admitted to a state or licensed private hospital for the insane, have the same standing as other private or county patients; provided, that all voluntary patients shall have the right to leave the hospital at any time on giving three days notice to the superintendent.

By an act passed by the legislature of New Jersey and approved April 9, 1910 (Chapter 184), provision is made for admission to any state hospital for the insane, as a private pay patient, of any resident of the state who, to use the language of the act, "believes himself about to become insane, or in danger of losing his reason, and is desirous of committing himself to treatment for the betterment of his mental condition, or the prevention of any further advance toward insanity, and whose mental condition is such as to render him competent to make such application."

Continuing, this act provides that a bond for cost of maintenance must be given within ten days after admission, that there may be a discharge on certificate of the medical director of the hospital showing either that the patient is cured, or that further treatment is unnecessary or undesirable, and the right is reserved to the patient to withdraw from the institution on three days' notice to the medical director thereof.

Massachusetts has an admirable self-commitment law now known as Section 45 of Chapter 504 of the acts of 1909, embodying the principles of an act of 1905. By the provisions of this section the superintendent of any institution, public or private, to which insane persons may lawfully be committed, may receive a patient on the written application of such person, the detention to determine on three days' notice in writing. There is a proper qualification to the effect that the mental condition of the applicant must be "such as to render him competent to make the application." This latter qualification is either embodied in the law or adopted in the practice in all of the states having voluntary commitment statutes. The reason for it is clear.

Of course, the question arises as to whether a person in need of treatment for mental disorder can enter into a binding agreement. The decision of this question must rest on the condition of the patient's mind on the subject of his liberty and the necessary restraint which he is about to undergo. If the opinion of the hospital physicians (and they are usually at such times acting in consultation and cooperation with the applicant's family physician) is that the patient is fully aware of the effect of the agreement, his signature thereto is binding. This same principle has been often invoked in the settlement of legal questions concerning the capacity of lunatics, and the books of reported cases contain many decisions upholding the competency of even adjudged lunatics as witnesses, as contractors and as testators. This is, indeed, the "partial insanity" of the law, repudiated as to technical interpretation by some medical authorities, but recognized by the highest legal tribunal of the land. And while the term "partial insanity" may be objected to by some medical men, all agree, physicians, lawyers and laymen, that the man who is insane may be competent to act intelligently and advisedly in many matters. An ancient case on this point was Dew *vs.* Clark, reported in 3 Add. E. R., 79, in which the Prerogative Court of Canterbury holding

to the doctrine of partial insanity, maintained that a party could be "both sane and insane at *different* times on the *same* subject, and both sane and insane at the *same* time on *different* subjects." Of course, it will be readily understood that patients who are deemed by hospital authorities as incompetent to sign an application for admission with a full and free understanding of the nature of the agreement, are denied, and quite properly so, the benefits of self-commitment. It is important to note in connection with this practice of voluntary commitment that there is apparently an entire absence of record of attempts to get out of hospitals by habeas corpus proceedings. This is striking evidence of the integrity of the institutions operating under the provisions of self-commitment statutes. Patients are kept because they continue to realize the desirability of treatment, or because, the mental disease having progressed, they have become indifferent as to freedom. In all other cases of voluntary admissions the patients are either discharged on their own written demand, or more formal proceedings having been instituted they are held by virtue of additional authority. Self-committed patients are not unnecessarily detained in hospitals any more than any other class of patients. Some day we may hope to have the public at large accept the belief that hospitals for the insane harbor only the insane and that the sane man is released from such hospitals as promptly and with the same facility as the man whose fever has subsided is discharged from a typhoid ward.

An alienist whose reputation extends far and wide — Dr. John B. Chapin of Philadelphia — in a record of voluntary admissions to three institutions a few years ago, reported an average of recoveries as 25 per cent., and stated that he had been unable to learn of a single habeas corpus application in the cases thus reviewed.

Dr. G. Alder Blumer, superintendent of Butler Hospital, in his report for 1908, referring to self-commitment, said:

> **Over 46 per cent. of our patients have been admitted under this latter form, whose value and importance as a means of taking in time the stitch that saves nine and of getting at the work of restitution and repair before the disease has passed the limits of a salvable vitality cannot be overestimated.**
>
> **The hospital conception has superseded that of custody and it has come about that immediate treatment is generally regarded as of higher obligation than mere documentary forms of law.**

Thus has been stated, by the eminent authority whom I have just quoted, the high purpose of self-commitment laws. There should be, and in these states there is, a method which permits persons with border-land and early stage cases to seek and receive treatment unattended by publicity, unaccompanied by painful and harmful distractions.

The patient who is so fortunate as to live in a state having a voluntary commitment law is enabled of his own motion, without the knowledge of anyone outside his family, and, particularly, without publicity of any kind whatsoever, to place himself under competent medical attention, direction and control. If his ailment is one which responds readily to scientific treatment, he returns in a short time to home and business without attracting any more attention than he would on returning from an ordinary vacation. Such a patient knows, and his family knows, that the state hospital or the private institution, subject as both are to the zealous visitations of lunacy commissions, will not keep him unless his condition so requires. This realization is a most important factor in assisting in the upbuilding of the disturbed mind. Far different, indeed, is the reflection of the man who, in order to be treated, has been obliged to submit to an open court proceeding and has been formally and publicly adjudged to be mentally unsound. The former is full of hope and looks forward to early resuming his place in business and society, the latter broods over his change of legal status, dreads to meet his friends and associates again, and when finally he emerges from the hospital finds a permanent sentiment against association with one who had been at any time pronounced insane.

The percentage of recoveries in other states compares most favorably with that given by Dr. Chapin, to which I have just referred. This is the natural result of the adoption of the plan of voluntary commitment. We have long since passed the time when custodial care of the insane was practically the sum-total of hospital treatment. The laws permitting voluntary commitment have done a great deal toward assisting medical men in giving to those afflicted with mental disorder the advantages of our latest methods in the hope of not only alleviating suffering, but with the larger and broader purpose of restoring the disturbed mind to its normal condition.

There remains for consideration the other side of the subject, the reflection, in the light of the foregoing, on the condition of the mentally sick who have the ill fortune to live in those communities which know not such a law. No more striking comparison can be presented than the situation which exists in the District of Columbia. The man with mental disorder here goes not to a hospital, though the government hospital of international reputation is at his very door. Instead he goes to police headquarters! And there he is told that he must have two residents of the District of Columbia make affidavit that he is insane, and two physicians so certify, and then he will be sent to a hospital for not exceeding thirty days, during which time the city fathers will hale him into court to have a jury of twelve men determine his mental condition. It might be suggested in passing that a jury of one or two good doctors could come closer to making a diagnosis than a dozen men of various occupations, not one of whom is a physician. The responsibility of those who have made this and somewhat similar laws in other jurisdictions, and those who are obliged to enforce such laws, is one which no thoughtful man can consider lightly. This thirty-day interval, during which time the patient must be brought into open court, covers a considerable part of the period when quiet and careful ministrations may strengthen the disordered mind. Is it conducive to quietude and repose to be served by a marshal, or a sheriff, with a summons to come to court and hear one's mental condition publicly discussed, and then to attend in court, with possibly a dozen other persons all mentally ill, and listen to the testimony concerning each? The practical and actual working of such a law is both a farce and a cruelty. On this subject a former president of the New York State Commission in Lunacy, Dr. Albert Warren Ferris, recently said: "It is an important fact that medical care of the insane should begin before the time when sufficient mental change has occurred to make a commitment possible."

Time is so essential that the delay of technical court proceedings is as dangerous as the effect of such hearings.

There is, to my knowledge, no sound argument against voluntary commitment, and in personal investigation conducted in the several states, to which I have referred herein, I have found no complaint against such proceedings. The value of such a provision of law I have

V. 5
1912

attempted to show. If the plan has helped the unfortunates in some jurisdictions, and never been the subject of just attack, it is due the unfortunates of other jurisdictions that they be given the opportunities and privileges that it offers. Apart and aside from the professional viewpoint of the physician, not only do the insane command our sympathy, but as our fellowmen they present to us an obligation which we must and should assume. As members of a great race, it is incumbent on the strong to assist the weak, and this must be done not only because of the personal sympathy which applies toward some, but because the conservation of the body social makes necessary such assistance.

CONTRIBUTION TO THE DIAGNOSIS OF MALTA FEVER *

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On the island of Malta there has been endemic for an indefinite period a febrile disease of the inhabitants, termed "Malta fever," and also known as "Rock," "Mediterranean" or "undulant fever." It is a specific infectious disease caused by the *Micrococcus melitensis*, which was discovered by Bruce in 1887. This infection was so exceedingly prevalent among the British soldiers and sailors stationed on the island that, in 1904, a commission was appointed by the British government, under the supervision of an advisory committee of the British Royal Society, to investigate the possible sources of infection and advise methods for its control. The commission has since investigated the disease in all of its phases in a most exhaustive manner and, as early as in 1905, was led to consider that the milk from the native goats was an important, if not the main, factor in the dissemination of Malta fever among human beings. It was found not only that the goats were susceptible to artificial infection, but also that about 50 per cent. of them acquired the disease naturally and that the organisms were eliminated in their milk and urine. It was then decided to investigate the milk of such infected, though apparently healthy goats, with the result that in Malta 10 per cent. of the goats were found to be eliminating the specific coccus in the milk, and that this milk when fed to monkeys even for a day was able to produce typical attacks of Malta fever which ran a course parallel to that of the disease in man. The only logical conclusion which could be formulated from this work was that the Maltese goats were carriers of the virus of Malta fever and were one of the principal means of transmitting the disease to human beings through the ingestion of their milk. All the available evidence points to contaminated food as the vehicle by which these goats become infected with the virus of Malta fever. Furthermore, it has been shown that the urine of infected goats and of ambulatory cases in man at times contains the *Micrococcus melitensis*, so that goats feeding on material that has come in contact with such urine (which is not at all infrequent by the usual method of handling these animals) are readily infected. Thus the frequency and the method of infection in goats are quite readily explained.

By the recent investigations of E. R. Gentry and T. L. Ferenbaugh,[1] the existence of Malta fever in Texas has been definitely established. Its occurrence in human beings has been demonstrated bacteriologically among certain families in the goat-raising sections of Texas, and since goats have been incriminated as carriers of the infection to man, the serums of a number of these animals in the infected localities were subjected to the agglutination test with positive results. The isolation of the *Micrococcus melitensis* from these goats has thus far not been successful, and the agglutination test was therefore relied on for the diagnosis of Malta fever in these animals.

The existence of this disease in Texas is of great moment, inasmuch as the general opinion has prevailed that the United States is free of Malta fever, and that the only occasions when the disease has appeared in this country were isolated instances, occurring through importation. In 1905, the Department of Agriculture imported a number of Maltese goats from the island of Malta for the purpose of obtaining foundation stock for a milch goat industry in this country. Certain facts in the history of their voyage to this country, which came to our attention about this time, suggested that some of the imported goats were infected with Malta fever virus. The presence of this infection among the Maltese goats was subsequently demonstrated by Mohler and Hart,[2] both bacteriologically and by a series of agglutination tests conducted in this laboratory. As a result of these tests it was deemed advisable to destroy not only the imported goats, which during these investigations were kept in quarantine, but also their offspring, as it was found that even the kids gave positive reactions to the agglutination test in many instances.

The numerous investigations which have been carried out relative to the methods of diagnosis of Malta fever appear to be quite uniform as to the reliability of the agglutination test for the diagnosis of this malady. Nevertheless, the results of some of the investigators prove that the agglutination value is by no means constant in the suspected patients, and it has further been established that human beings, as well as goats, although apparently recovered from the disease, give an agglutination value of the serum indicative of Malta fever even years after the infection. It has also been found that the agglutination value in the presence of this affection is by no means constant, and occasionally it may even fail to indicate the presence of the infection.

Furthermore, there appears to be a diverse opinion among the investigators of Malta fever relative to the height of the agglutination value which should be considered as indicative of an infection. Thus, by some writers, an agglutination of 1 to 10 is considered as sufficient proof of the presence of the disease; others claim 1 to 20, while still others require 1 to 30 as the lowest value for a positive diagnosis. During the quarantine of the goats imported from Malta, referred to above, the Bureau of Animal Industry conducted a number of experiments in order to determine the agglutination value of normal goat-serum for the virus of Malta fever. It was found repeatedly that such serums from healthy goats, born and raised at the experiment station, gave an agglutination value of 1 to 40. Hence, in the tests of the quarantined Maltese goats, an agglu-

* From the Pathological Division, U. S. Bureau of Animal Industry.

1. Gentry, E. R., and Ferenbaugh, T. L.: THE JOURNAL A. M. A., Aug. 26, 1911, p. 730; Sept. 9, 1911, p. 889; Sept. 23, 1911, p. 1045; Sept. 30, 1911, p. 1127.
2. Mohler and Hart: Twenty-Fifth Ann. Rep., Bur. Anim. Ind., 1908, p. 279.

tination value of 1 to 70 within a time limit of one and one-half hours was required for a positive diagnosis. Kolle and Hetsch[3] state that the agglutination test is indicative of Malta fever only when its value represents a titer of at least 1 to 100.

In consideration of this difference of opinion regarding the agglutination value of serums from suspected and infected patients, it was deemed advisable to carry out preliminary experiments to determine whether the complement fixation test could be utilized for the diagnosis of Malta fever. Serums of a large number of goats from the experimental farm at Beltsville, Maryland, were obtained and tested both with the agglutination and complement fixation tests. In the meantime, two goats were subcutaneously injected with 0.5 c.c. of a washed agar culture of the *Micrococcus melitensis*.

The agglutination test was applied both by the microscopic and macroscopic methods, but the best results were obtained from the macroscopic method carried out by a procedure similar to that practiced for the diagnosis of glanders. For this purpose the test fluid is prepared from a four-day-old glycerin agar culture of the *Micrococcus melitensis* by heating the culture at 60 C. for one and one-half hours, which is then washed with phenolized salt solution, filtered and diluted to a desired density. This is established by comparative tests with serums of known agglutination values determined by microscopic agglutination. Once the titer of the agglutination fluid has been established by these comparative tests, the proper density of a newly prepared fluid is readily obtained by pouring a sample of each, respectively, into two beakers of equal size up to the height of about 2 cm. The density of the old and new fluids may then be compared by placing the beakers on print, preferably engraved print, and observing the legibility of the print through the fluid. The dilution of the new fluid is continued until the density becomes similar to that of the old fluid. The numerous comparative tests which have been undertaken with the microscopic and macroscopic agglutination tests show that a reliable uniformity has always been obtained. The technic of the macroscopic agglutination test is carried out as follows:

The suspected serum is diluted with phenolized salt solution in the proportion of 1 to 4 (0.5 c.c. serum to 1.5 c.c. phenolized salt solution). This constitutes the basic dilution, and from this all the dilutions of serums are made in test-tubes in such a way that with the added 2 c.c. of test-fluid (bacilli emulsion) the desired dilutions are obtained. Thus, 2 c.c. of test-fluid added to 0.2 c.c. of the basic dilution would give a serum value of 1 to 40. Any number of different dilutions can be prepared in this manner. The rack containing the test-tubes is then placed in the incubator for one-half hour, after which the tubes are removed and centrifugalized for ten minutes at 1,600 revolutions per minute. The test-tubes are then returned to the rack without further incubation and the results read after one to two hours. The sharply circumscribed lentil-shaped sediment in the center of the bottom of the test-tube with cloudiness of the upper portion of the fluid indicates the failure to agglutinate, while an irregular, veil-like clumping of the sediment over the bottom of the tube with a clearing of the upper part of the fluid is indicative of agglutination. The racks are so constructed that they have a conical opening on the lower shelf into which the bottom of the test-tubes fit, and through these openings the reaction is plainly visible, especially when placed on a dark background.[4]

This method of agglutination would come especially into consideration if large numbers of serums were to be tested, and particularly if it were desired to examine the blood of a great number of goats in certain localities for the control or possible eradication of the disease.

The serums of healthy goats from the experimental farm and that of twenty suspected goats from Texas, as well as the serums from the artificially infected animals, were carefully tested by the microscopic agglutination and also by the method just described. The results showed practically no variation in these two methods, and in consideration of the simplicity of the macroscopic method as described, it would appear that it should be given the preference over the microscopic method, especially in cases in which a large number of individuals are to be tested.

In the meantime, experiments have been conducted with the complement fixation test for the diagnosis of Malta fever with serums from normal as well as from infected animals. The hemolytic system consisted of sensitized rabbit-serum, serum from a guinea-pig, and a 5 per cent. suspension of washed sheep-corpuscles. An antigen was prepared from four-day-old glycerin agar cultures, and after being heated for two hours at 60 C., it was agitated for four days in a shaking-machine.

The extract was then placed in centrifuge tubes and centrifugalized for two hours at a speed of about 2,500 revolutions per minute. The clear fluid was drawn off and preserved with 10 per cent. of a 5 per cent. phenol (carbolic acid) solution. A titration of the antigen was then undertaken in order to establish the smallest quantity which would no longer prevent hemolysis. A dilution of 1 to 50 was found to be the proportion of antigen to be used in the tests.

The goat-serum to be tested was inactivated at 56 C. for thirty minutes. The complement was titered in each instance in order to establish the necessary smallest quantity required to produce complete hemolysis. Of the serums to be examined, 0.2 c.c. and 0.1 c.c., respectively, were used, and the customary control-tubes were always included in the test. Thus, in routine testing, four tubes were taken for the test proper, the first pair receiving 0.1 c.c. of serum, and the second pair 0.2 c.c. The second and fourth tubes served as controls for the serum, in order to establish that the serum without the antigen would not produce a fixation of complement.

The serums from the goats at the experimental farm failed to give a fixation in any instance, although, in several cases, it was observed that the hemolysis resulted slowly, and sometimes a very small quantity of blood corpuscles settled to the bottom of the tube, but in all these instances the reaction was the same in all four tubes; namely, in the tubes for the test proper, as well as in the control-tubes. Of the serums examined from the suspected cases sent from Texas, four gave positive complement fixation, and in all these instances the fixation was complete, even in the tube in which only 0.1 c.c. of serum had been used, while sixteen other examinations of serums from the same source gave negative results.

3. Kolle and Hetsch: Die experimentelle Bakteriologie und die Infektionskrankheiten mit besonderer Berücksichtigung der Immunitätslehre, 1911

4. A more detailed description of the technic of this method as applied to glanders, together with drawings showing the above-described appearances of the sediment in both positive and negative reactions, will be found in Circular No. 191 of the Bureau of Animal Industry, to be issued shortly.

The agglutination test of the serums from the cases in which a fixation of the complement was obtained showed a value in one instance of 1 to 50, in two, 1 to 15, and in the fourth it failed to agglutinate even at 1 to 10. The remaining sixteen cases failed to agglutinate in the proportion of 1 to 10.

The serums of the goats which had been artificially infected were drawn every day from the time of infection and examined both by the agglutination and the complement fixation tests. On the fifth day an agglutination of 1 to 40 was obtained, which on the subsequent days was marked at 1 to 500 and reached a height of 1 to 2,000, continuing to give an agglutination value of over 500 for the two months after infection, during which period the animals have been under constant observation. A partial complement fixation was first obtained on the seventh and ninth days, respectively, and from that time on a perfect fixation was obtained in all instances. In these tests even smaller quantities than 0.1 c.c. gave a fixation; thus, in establishing what would be the smallest quantity of serum which would give a complete fixation, it was found that on the twenty-second day after the infection in one goat, 0.04 c.c. of serum gave a complete fixation.

From the results of these investigations it appears that the complement fixation test can be utilized for the diagnosis of Malta fever, and in consideration of the fact that the agglutination test is not always reliable for such purposes, the complement fixation would be of great advantage as an adjunct in the diagnosis of this malady.

Additional samples of serums will be obtained from goats in those localities of Texas where the disease has been known to exist in human beings, and a further opportunity will therefore be presented to determine whether the very favorable results thus far obtained with the complement fixation test will be confirmed.

. 58
912

AN EPIDEMIC OF SEPTIC SORE THROAT IN BALTIMORE AND ITS RELATION TO A MILK-SUPPLY

A PRELIMINARY REPORT *

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During the month of February, 1912, it became evident to a number of practitioners of Baltimore that a throat affection presenting an unusual clinical picture was epidemic in the city. Cases apparently similar had been observed during the early winter months, but the sudden appearance of hundreds within a few weeks could not fail to attract attention.

Though children were chiefly affected, adults were not spared. The malady was characterized by a sudden onset, high and irregular fever, inflammation of the fauces of varying degree, marked enlargement of the cervical glands and a course much longer and much more severe than the usual type of tonsillitis. At first discussed indefinitely as "grip" it was not until the close of the month, when at least three fatalities were reported, that it became apparent that we were dealing with a "new and very terrible disease."[1]

At this point I was impressed by the uniform results of the cultures taken from patients' throats and of the examination of smears from the inflammatory exudates complicating the disorder. Thus, the discharge after paracentesis of the ear-drum in the case of a child 5 years old showed within leukocytes numerous pairs of Gram positive cocci, while a culture from the secretion of the opposite ear discovered the cocci in chains still retaining their diplococcic arrangement. Since then, this streptococcus has been obtained whenever it has been sought, often in pure culture. In this way, it has been recovered not only from the fauces and otitic exudate, but from the suppurating lymph-nodes, from the peritoneum during laparotomy and from the blood of the femoral vein at autopsy.

The organism is being studied in Dr. Charles Simon's laboratory by Dr. Simon and his associate, Dr. G. Howard White, and a full report of their findings will be published in due course of time. At present it may be said that in the direct smears it often appears as an end-to-end diplococcus, intracellular in some specimens. Each pair seems surrounded by a halo, but with the capsule stain of Welch, Burger and His, no envelope can be demonstrated. On agar it grows in dew-like droplets. It coagulates and acidifies milk and in this liquid it develops in long chains with end-to-end arrangement and sometimes in tetrad form, division having taken place in two planes. The organisms are not dissolved by bile salts. Blood-agar plates show a hemolytic zone around individual colonies. In broth the cocci cause uniform turbidity. They do not ferment inulin.

The organism was demonstrated to a number of colleagues Friday evening, March 15, 1912, and the following day the report of Davis and Rosenow appeared,[2] describing a "peculiar streptococcus" obtained in the course of an epidemic of sore throat prevailing this winter in Chicago. It is obviously the same organism and the same infectious disease.

A significant feature of the Baltimore epidemic is the large number of cases of severe type appearing suddenly within a few weeks in the month of February. Indeed, many of the cases appeared within a few days in widely separated portions of the city. Struck by this fact I ventured to assume that one of the more general carriers of epidemic disease, such as milk, might be at fault. Thereupon, inquiry was instituted in twenty-five households in which the type of sore throat under discussion prevailed with the noteworthy result that in every instance it transpired that the milk-supply was derived from the same dairy. These returns were submitted at the meeting of March 15, and, making allowance for statistical error, confirmatory evidence as to the coincidence of disease and dairy was added and appeared so convincing that it was deemed advisable to caution the public to boil all milk. Accordingly, through the medium of the newspapers the advice to boil milk was repeatedly promulgated during the week following March 16. Immediately, too, the dairy in question raised its pasteurization temperature to 160 F. and during the ensuing week changed its method from "flash" system to the "holding" device. In other words, instead of maintaining the milk for three minutes at a temperature of 145 it increased the duration of pasteurization to twenty minutes. It is of interest to note that at present, a week later, the new cases, which are apparently neither so severe nor so numerous, do not follow the milk-supply, but occur in prosodemic fashion; namely, they appear to be transmitted from individual to individual through various channels of communica-

* From the Medical Clinic of the Johns Hopkins Hospital.

1. Sedgwick, William T.: Boston Med. and Surg. Jour., Dec. 14, 1911, p. 910.

2. Davis and Rosenow: THE JOURNAL A. M. A., March 16, 1912, p. 773.

tion. Many patients mildly affected are ambulatory, and it can be readily understood how these foci of infection may distribute the disorder in irregular manner and thus obliterate the traces of the milk-route.

There is in process of organization a statistical inquiry into the incidence of the disease as it was distributed in the city in the month of February and the first half of March.

The proprietor of the dairy along the route of which the overwhelming number of primary cases developed is esteemed an able dairyman and gave us every opportunity to investigate the possible trouble and safeguard the public delivery. It was disclosed that on Feb. 26, 1912, Driver 10 was sent to a hospital suffering from abdominal pain, with a tentative diagnosis of appendicitis. The affection was obscure and in its course a sore throat became the prominent feature. A few days later Driver 11 contracted a sore throat and was very ill. The policy of the dairy has been to allow its employees to drink milk while in the establishment, and when these two men were stricken the proprietor was quick to enforce the rule that only individual cups should be used and that any indisposition among employees should be promptly reported. It is unlikely, however, that these men infected the supply because of the great number of cases antedating the onset of their illness. Indeed, the date of their attacks corresponds with the height of the epidemic in the city. The infection must have proceeded from another origin.

The statement was then volunteered that during the rigorous winter weather of the latter part of January it was necessary to make repairs in the room in which the pasteurizer was situated, and for the time it was disabled. Certain it is that the milk was not heated from Jan. 28, 1912, to Feb. 5, 1912, and unpasteurized milk was delivered during that period and perhaps longer. It was thought that during such extreme cold the risk of incubating a pathogenic organism was practically negligible. It is probably fair to assume that the organism was conveyed in raw or inadequately heated milk during the latter part of January and for some time in February.

The source of the presumably infected milk is still to be determined. The dairy derives its supply from many Maryland farms, and its proprietor has begun an investigation to ascertain, if possible, the presence of either human or bovine disease on the premises of its tributaries. He has also called to his aid an expert bacteriologist who is likewise determining the thermal death-point of the streptococcus in question.

For the second time there is herewith recorded in the United States an epidemic of severe throat infection probably connected with a milk-supply. The eastern Massachusetts epidemic of May, 1911, is ably described by C. E. A. Winslow,[3] and was without doubt milk-borne. Professor Winslow calls attention to several similar outbreaks that have occurred in Great Britain, each having been traced to milk. In England the affection is known as "septic sore throat," a term which it is advisable to continue to use for the present.

At another time, the clinical history of the Baltimore outbreak will be written in detail. Since, however, there is reason to believe that this streptococcus infection may be widely distributed through the country, it is justifiable to indicate in abstract the symptomatology of septic sore throat as it occurred in this city.

3. Winslow, C. E. A.: Boston Med. and Surg. Jour., Dec. 14, 1911, p. 899.

In contrast with the Massachusetts epidemic in which adults suffered more, children were more frequently attacked and more severely ill in the Baltimore outbreak. The onset was sudden with chill or chilly sensations or with a convulsion in infancy. The little ones who could talk complained of a sore throat. The appearance of the fauces varied. Most frequently there was a dusky red discoloration, a faucitis. In other cases there was a typical follicular tonsillitis or a diphtheroid condition, or much peritonsillar infiltration, which in some adults led to the formation of an abscess, to the development of a "quinsy." In most of the severe examples of the malady the faucial lesion was of small import as compared with the constitutional disturbance.

Within the first week, in children, the cervical lymphatic glands in the vicinity of the angle of the jaw enlarged so as to form visible tumors of considerable size. These cervical buboes gave a characteristic picture to the disorder. When bilaterally prominent the little ones looked like victims of Hodgkin's disease. It is known that because of these swellings the condition was mistaken in several instances for mumps. The adenitis ran a variable course. In the majority, even when the glandular mass was of large proportion it slowly subsided without suppuration, varying in size from day to day, now increasing and again diminishing. Occasionally, suppuration occurred and surgical intervention was indicated. In many children who have recovered the buboes remain visible, a source of anxiety to the parents, but of no discomfort to the children. It was soon apparent to many of us that in the case of children who were markedly ill the size of the cervical bubo was of prognostic value. A large and persistent bubo was regarded as of good omen; for, in the fatal cases the glands were only moderately enlarged and quickly diminished in size.

The spleen and edge of the liver were frequently palpable beneath the costal margin. Vomiting at the onset was common. Abdominal pain without subsequent development of general peritonitis was a disturbing symptom. Prostration was generally marked and the children became pale and thin and gave all the indications of having undergone a severe illness. There was a leukocytosis but the differential count gave no noteworthy information.

The temperature rose quickly, in one case to 106.6 F. The curve has been very irregular. With the onset of suppurative processes the temperature assumed the usual intermittent type.

The course of the illness was marked by great variation. In the same household there were those who were so mildly ill that they did not take to bed, while others exhibited all the signs of a profound septicemia for three or four weeks. Even in an individual case there was great irregularity One day the patient seemed bright and convalescent: on the next, there might be a return of fever, somnolence and increase in the size of the bubo.

The complications so far observed have been otitis media, peritonsillar abscess, suppuration of the cervical lymph-nodes, erysipelas, tenosynovitis, arthritis, "transient edema of the eyelids," nephritis and peritonitis. It is the last-named condition, peritonitis, which was the cause of most of the deaths. Of eleven fatalities of which I have record peritonitis was the terminal event in at least eight. Erysipelas proved fatal in the case of a four months old baby.

How quickly disaster followed inflammation of the peritoneum is illustrated by the following history:

A little boy, 3 years old, whose sister was suffering from the same streptococcus septicemia, and who himself had been well the previous day, complained on March 4, 1912, of a sore throat.

At 10 a. m. his temperature was 104.4 F. The anterior pillars of the fauces were of a dusky red color. The tonsils were not enlarged, and there was no exudate. The cervical glands were slightly enlarged. At 7 p. m. the temperature was 106. During the following day he was delirious and suffered from diarrhea, having passed ten small yellow liquid stools.

A culture taken from the throat disclosed the streptococcus previously described. On the morning of the third day, March 6, he was much improved, bright and crying for cake and permission to leave the bed. The rectal temperature at 10:30 a. m. was 100.4. Yet, at noon he vomited and the temperature rose so that at 4:30 p. m. it registered 106. He had had three liquid stools during the day. Examination of the ears was negative. At 5:30 p. m. he looked very ill. His pale skin presented a purplish mottling. The pulse was of small volume, the abdomen was tender. He begged for water.

It was given repeatedly in small quantity but was vomited each hour. The child retained consciousness throughout the night although the radial pulse was not palpable; the abdomen became distended, vomiting continued, and at half past eight on the morning of the fourth day of his illness he was dead.

A letter written during the Massachusetts epidemic of 1911[4] appears so graphic to those of us who saw many of the cases that I append it as a summary.

"The death of Mrs. X. seems the very culmination of this tragic season. Cambridge is like a city of the plague. Whomever one meets, the talk is all of who is ill, who has had a relapse, who has died. The diagnosis of it is ill. It is no tonsillitis, but a most malignant poison, issuing now in erysipelas, now in abscesses, now in rheumatism or neuritis, sometimes fatal in three days. All of the principal doctors here are now convinced that it comes through—milk."

1207 Eutaw Place.

EPIDEMIC OF SORE THROAT DUE TO MILK

A PRELIMINARY NOTE

J. L. MILLER, M.D.
AND
J. A. CAPPS, M.D.
CHICAGO

For several weeks we have been investigating the possibility of the recent epidemic[1] of streptococcus sore throat in Chicago originating in the milk-supply. In our own personal observations we have found that the great majority of the victims drank milk from one dairy. This fact, taken in connection with the sudden appearance of a great number of cases over a large portion of the city, has convinced us that the infection was probably spread by means of milk.

The investigation is being continued in cooperation with the Department of Health and will be reported later in full.

This preliminary statement is made in order to emphasize the importance of a thorough inquiry into the milk-supply in the many communities where a similar epidemic exists.

122 South Michigan Avenue—32 North State Street.

4. Sedgwick: Boston Med. and Surg. Jour., Dec. 14, 1911, p. 910.
1. Davis and Rosenow: THE JOURNAL A. M. A., March 16, 1912, p. 773.

CERVICAL RIB

EVAN S. EVANS, M.D.
GRINNELL, IOWA.

In 1907, Drs. W. W. Keen and C. K. Russell reported series of cases of cervical rib, and reviewed the literature to that date. The condition occurs apparently in the proportion of three females to one male. This may be on account of the fact that deformities of the neck are more apt to be noticed in women than in men. The age at onset of symptoms is usually between 20 and 30, and is frequently determined by some occupation which necessitates the use of the arm. It is occasionally marked by the occurrence of an injury.

Anatomically, these ribs are analogous to the supernumerary floating lumbar ribs, and are often no more than hypertrophies of the transverse processes of the cervical vertebræ. A vestige is always present in the embryo. They are bilateral in 80 per cent. of the cases. They may extend anteriorly to join the sternum or end at a variable distance from it. In the latter case, they may join the first rib near the scalene tubercle, or merely project out into the neck, being connected with the first rib by a strong tendinous band. Occasionally the rib is represented only by an elongation of the transverse process in the form of an exostosis. Rarely; the first thoracic pair is incomplete and assumes the anatomic characteristics of a cervical rib, except in the matter of location and relations.

The cervical rib comes off the seventh cervical vertebra and, if it joins the sternum or the first rib, the scalenus anticus muscle will be attached to it. Indeed this often happens when the rib is incomplete and connected to the first rib by a tendinous band. In these cases the subclavian artery arches up over the rib behind the scalenus anticus muscle and passes down again into the neck, making an acute angle over the rib. The vein will be found lying lower down, separated from the artery as usual, by the muscle. This explains the absence of edema due to interference with the vein. The nerve-trunks of the brachial plexus pass over the rib at a higher level than the artery. The nerve-trunks are angulated — especially those of the eighth cervical and first dorsal roots—and occasionally stretched sufficiently to produce disturbances in innervation of varying degree in the muscles supplied by them. When the nerve is incomplete and short, it may grow forward into the structures of the neck and produce the same symptoms by irritation. Or it may, by lying close in against the carotid sheath, produce disturbances of the vagus and recurrent laryngeal nerve-fibers with symptoms referable to their irritation. The rib, when sufficiently developed to supply insertion to the scalenus anticus, is usually supplied with intercostal muscles extending to the first rib. The phrenic nerve, lying along the edge of the scalenus anticus, is occasionally in relation to the end of the cervical rib. The subclavian artery, arching across the rib behind the scalenus anticus, may show a narrowing of its lumen at the point of crossing, and occasionally a slight dilatation proximal to the point of crossing. Small aneurysms have been observed within this location. The artery may become occluded at this point by thrombosis, and, unless sufficient collateral circulation be speedily established, a dry gangrene attacks the limb, usually limited to the finger-tips. The pleural cavity extends up into the neck directly under the cervical rib, and the costal periosteum lies directly in relation to the parietal peritoneum. The pleural cavity normally reaches a point one-half inch above the clavicle

between the sternal and clavicular heads of the sternomastoid, or about one and one-half inches above the anterior end of the first rib. Hence the presence of a cervical rib increases the capacity of the thorax by the amount of an intercostal space.

When long enough to be demonstrated clinically a cervical rib will appear as a rather hard tumor in the supraclavicular region at the root of the neck, usually on the left side. As a rule there is a visible pulsation of the tumor due to the passage over it of the subclavian artery. Light compression gives to the fingers a curious bruit, not unlike the bruit of aneurysm. Firm compression will obliterate the pulse in the radial artery on the affected side.

We may group the symptoms under two heads: (I) nervous and (II) vascular.

I. NERVOUS SYMPTOMS

1. *Sensory Symptoms.*—A. Pain, usually of a dull, aching variety, gradually increasing over a long period of time and frequently most marked over the ulnar distribution. It may be throbbing or boring in cases of pressure neuritis. Pain is aggravated by the use of the arm and by moderate degrees of cold, and alleviated by holding the hand affected on or above the head. B. Hyperesthesia, especially over the ulnar distribution, and sometimes over the whole arm. C. Paresthesia, frequently associated with pain and hyperesthesia and commonly noted in the hyperesthetic zones.

2. *Trophic Muscular Atrophy.*—Of the muscles, those muscles supplied by the ulnar nerve are notably liable to atrophy. The interossei and the thenar and hypothenar eminences are most prominently affected.

3. *Respiratory Disturbance.* — Such disturbance, due to irritation of the phrenic nerve in its course along the scalenus anticus by a long cervical rib, is believed to be a possibility. Hunt[1] reports a case of spasm of the diaphragm which was immediately relieved by the removal of a cervical rib. Dysphonia, cough, and even laryngeal paralysis are occasionally noted from pressure or irritation of the inferior laryngeal fibers by the rib or by dilatation of the subclavian artery.

II. VASCULAR SYMPTOMS

Vascular phenomena depend in part on a constriction of the artery between the rib and the scalenus anticus, and in part on vasomotor influences not clearly understood. Osler mentions cases in his paper, in which a condition identical with intermittent claudication existed in the affected limb, stiffness and redness of the parts while at rest, and blanching or cyanosis, with cramping pains in fingers after moderate use. Cyanosis is not so common as blanching, but in either case the parts are cold and clammy to the touch especially when dependent.

Compression of the artery apparently does not account for all the cases in which these symptoms appear. Miller reports several cases of the kind in which the rib was removed, in only one was there indication of constriction of the artery by pressure. In some cases the interference is, not by the rib itself, but by the tendinous band which extends from the end of the rib to the scalene tubercle. Gangrene is occasionally seen when the artery is nearly or entirely occluded by pressure, or by a thrombus. It is usually limited to the tips of the fingers. Muscular weakness is the rule, especially after continued use.

DIAGNOSIS

The salient points in the diagnosis are: (1) the *x*-ray; (2) ischemia, with cramps in the hand, persistent or continuously intermittent; (3) pain in the arm, gradually increasing over a considerable period of time, aggravated by moderate cold and by use, and alleviated by elevation; (4) brachial neuritis, especially of ulnar distribution, with atrophy of the interossei and the thenar and hypothenar eminences; (5) a small firm pulsating tumor in the supraclavicular region with or without accompanying symptoms of pain, atrophy, etc., is, nine times in ten, a cervical rib. It is estimated that only about 10 per cent. of cases of cervical rib have any symptoms at all.

It must be differentiated from (1) aneurysm of the carotid, subclavian, or vertebral arteries; (2) brachial neuritis; (3) bursitis of the subscapular or subdeltoid bursæ; (4) occupation neurosis.

TREATMENT

The treatment is obviously surgical. Some cases do well enough for a time on treatment by rest and position, but ultimately excision is the only recourse. The results are sufficiently satisfactory to warrant its use in those cases which produce symptoms. The pain is usually relieved after a period of days or weeks, but occasionally persists in less degree for a longer time. Postoperative paralysis from rude manipulation of the brachial plexus is not unknown or uncommon, and while it usually disappears is occasionally permanent.

REPORT OF CASE

In my case a cervical rib was discovered during the course of a physical examination of the chest. The patient is a woman, aged 40, married, with nothing suggestive in her personal history. She has never been subject to rheumatism, nor had any difficulty with her hands or arms. She presented herself to me with a history of a cough of two months' standing. In the course of the examination, a pulsating tumor was noted above the left clavicle. It is about 1¼ inches long and 1 inch wide, and lies at the root of the neck behind the sternomastoid and about 1 inch above the clavicle. On palpation a thrill synchronous with the pulse was transmitted to the finger, and the radial pulse was obliterated by firm compression. The tumor was firm and hard and could be traced with the fingers backward under the edge of the trapezius almost to the vertebra. Examination of the lungs was negative for signs of tuberculosis and the cough cleared up under treatment, so the conclusion was reached that the two conditions were not related.

As the *x*-ray is not accessible, we have based our diagnosis of cervical rib on the presence of a firm pulsative tumor in the supraclavicular region, traceable nearly to the spinal vertebra, and carrying over it an artery, compression of which cuts of the corresponding radial pulse.

1. Hunt: Brit. Med. Jour., Aug. 7, 1909

DUPLEX UTERUS (DIDELPHYS)

CHARLES H. FRAZIER, M.D.
PHILADELPHIA

The malformations and deformities of the uterus, varying in degree from the almost complete absence of that organ to the very rare cases of its duplication, known as duplex uterus (dihysteria, didelphys), are of intense interest because of their clinical and pathologic aspects. These malformations are due, on the one hand, to the imperfect development of the Müllerian ducts and are classed as uterus deficiens, uterus rudimentarius, uterus fetalis, and uterus unicornis, and, on the other, to the imperfect blending or non-union of those two ducts, which normally fuse during the third fetal month to form the uterus and vagina. The latter malformations result in the so-called double uterus, and embrace

the uterus septus, the uterus bicornis, and the uterus duplex separatus or didelphys, of which the case to be recorded is an example.

In the uterus septus, the uterus is divided internally by a septum of which there is no evidence on the exterior, the vagina also being septate. When there are two horns which are united to a limited degree we use the term "uterus bicornis." If these two horns enter a common cervix at the os internum, it is known as "uterus bicornis infrasimplex"; if the cervix is separated either partially or completely by a septum, the term "uterus bicornis unicollis" is applied; and if there are two cervices with their median surfaces close together, it is known as "uterus bicornis duplex."

By far the rarest of the so-called double uterus malformations is the duplex uterus, in which both uteri and both cervices are completely separated, save for a loose fold of the peritoneum; sometimes viscera even lie between them. Each half is supplied with its own tube, ovary and round ligament, though the halves are often very unequally developed, and one vagina may end blindly above the vulva, so that the corresponding uterus is shut off from the outside. The vagina may be single, double or partially divided, and it may be imperforate on one or both sides.

The duplex uterus is of the utmost importance pathologically, for hematometra and pyometra have occurred in such a uterus, and gestation has taken place in one half or in both halves simultaneously. Giles, in a paper read before the Obstetrical Society of London in 1895, classified twenty-five cases of duplex uterus which he had been able to collect from literature as follows:

Five cases of hematometra or pyometra in one half; eight cases of gestation occurring in one half; two cases of gestation occurring simultaneously in both halves; six cases uncomplicated by gestation or retained menstrual products; four cases discovered on the post-mortem table.

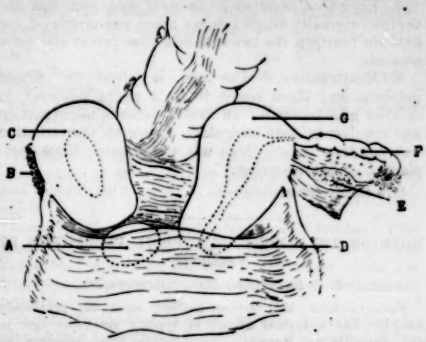
Occasionally instances do occur, as is evident from the tabulation above, uncomplicated by menstrual disturbances or gestation and in which the deformity is revealed only at necropsy. But usually numerous and grave complications accompany this malformation among which are unilateral atresia, dyspareunia, double vaginitis or endometritis, obstruction to labor by the retroverted non-gravid half, obstruction due to the vaginal septum and retained and undiscovered products of conception in one half in cases of double pregnancy.

The patient who came under my observation was admitted to the Episcopal Hospital, Jan. 4, 1912, with the following history:

Summary.—Uterus duplex separatus (didelphys); single vagina; left uterus and adnexa normal; right hematometra, uterus without outlet, and with only vestige of cervix. Right salpingo-oöphorectomy and hysterectomy. Recovery.

Patient.—Louisa L., aged 19, unmarried, had been in good health until the age of 16 when her menses began. They had been irregular and always associated with extreme pain and often vomiting. About one year ago a dilatation and curettage were practiced without any relief, and two months ago a right salpingo-oöphorectomy was performed, also without relief. When she came under my observation she was still complaining bitterly of pain in the right lower abdomen. The muscles of the lower abdomen were extremely rigid, and she was very sensitive to pressure on the right side below McBurney's point. On account of the muscular rigidity a satisfactory examination could not be made, but a round mass about the size of an egg could be detected in the right sulcus and the cervix was displaced somewhat to the left of the median line.

Operation.—The patient's suffering had been so extreme and so constant with each menstrual period since her menses began that she was willing to undergo any operation which would assure her of absolute and permanent relief. Accordingly I decide to operate without further delay, and on opening the abdomen through a median incision I found that the left uterus with its tube and ovary were normal, although the uterus was deflected to the left. A sound was readily passed into the uterine cavity, showing the absence of atresia of the cervix. The left uterus was separated by a space of 3 inches from the right uterus, which was adherent to the stump of the broad ligament (the right tube and ovary having been removed before the patient came under my care). As the pain had always been on the right side, I assumed the right uterus to be at fault and proceeded to remove it. It was found to be filled with blood (hematometra) and to have no outlet and no cervix. After its removal further exploration revealed a small cystic swelling almost in the median line just beneath the peritoneal reflection of the bladder. This swelling had no communication with the uterus or with the vagina and no doubt was the mass felt on vaginal examination, and believed at one time to be a pyosalpinx. This was dissected free with some little difficulty, as it lay just beneath the vaginal mucosa and the two structures were not separated easily. The denuded arms were covered with peritoneum and the abdominal wound closed. As the left uterus, tube and ovary appeared normal in every respect and the cause of the dysmenorrhea had been removed, there seemed to be no indication for their removal and every reason why they should be conserved, especially as in the removal of the right uterus and its adnexa, we had removed the source of the more serious complications such as double pregnancy, hematometra, pyometra and complications of labor.



Diagrammatic representation of author's case of double uterus (didelphys). A, vestige of right cervix represented by a cyst with no communication with the uterus; B, the stump of the broad ligament after salpingo-oöphorectomy; C, right uterus without any cervical canal or outlet; D, cervix of left uterus; E, left ovary; F, left fallopian tube; G, fundus of left uterus.

Fortunately, however, this condition is not of very common occurrence. In 1859, Kussmaul wrote that the double uterus had been seen only in cases of still-born children; and in 1873, Frankel cited the cases of Olliver and Bonnet as the only two observed in living adults. Gile was able to collect only twenty-one such cases from literature between the years 1875 and 1900. An analysis of these cases reveals the following facts:

1. *Age.*—The condition was discovered earlier in the cases of hematometra and hematocolpos than in the others, viz., at 16 and 18. The remainder were mostly between the ages of 20 and 30.

2. *Marriage.*—Fifteen out of twenty-one were married; in two of these there was history of dyspareunia. In three, coitus had taken place in both vaginæ.

3. *Parity.*—Of the fifteen married only one had not been pregnant; three others had had only a miscarriage, and in one of these the miscarriage occurred from double pregnancy. The remaining eleven had borne living or viable children. Among these eleven there were sixteen labors, of which ten were natural. The remaining six had the following characters: in three, obstruction by the retroverted non-pregnant half; in one, obstruction by the septum. It is curious that in this case the two previous labors were unimpeded. Lastly, in two cases forceps were required. The prognosis as regards fertility is therefore good. The prognosis is not so good, however, as to labor, although this is better than one would be led to expect.

4. *Relative Size of the Two Halves.*—In four cases they must be regarded as about equal, inasmuch as both halves had become pregnant. In the remaining seventeen the right half was the larger in six, and the left in eleven.

5. *Vaginal Condition.*—In only one case was the vagina originally single; in six there was atresia of one half; in fourteen the two channels were patent and quite separate.

6. *Menstruation.*—The age is given for fifteen patients, and there seems to be a slight tendency to delayed menstruation. In twelve patients menstruation was regular, in four irregular. In eleven menstruation was painless, in one there was slight pain; three complained of dysmenorrhea.

1724 Spruce Street.

NOTE ON TREATMENT OF TYPHOID PERIOSTITIS BY VACCINES

F. C. SHARPLESS, M.D., ROSEMONT, PA.

Patient.—John M., carriage-builder, aged 32, previously healthy, had a typical attack of typhoid six years ago, in the Bryn Mawr Hospital. One month after recovery he noticed, in the middle of the right tibia, an area of tenderness and edema measuring about 3 inches in length. The condition was only slightly painful and did not interfere with his work. It inconvenienced him greatly, however, because any accidental abrasion in the affected region was very slow in healing; behaving, in fact, like an ordinary varicose ulcer and yielding only to firm strapping and bandaging. The condition continued without intermission, and the area involved increased in extent upward, until within 1 inch of the tubercle of the tibia.

Treatment.—Nov. 20, 1911, a dose of 90 million dead typhoid bacilli was injected in the right ankle and ten days later, 180 million. Following the second injection there was an intense local reaction marked by swelling of the entire leg below the knee, a temperature of 102 F. and great pain.

Course.—One week later the patient announced that his leg was well. The injections of 180 million bacilli were continued, however, at ten-day intervals. At present (March 12, 1912) there is a trifling edema which disappears over night, but no pain or tenderness. The patient is convinced that his leg is well.

AN UNUSUAL LITHOPEDION

HENRY G. SMITH, M.D., CEDAR GROVE, N. J.

Patient.—Mary C., born in the West Indies, was admitted to Essex County Insane Hospital in December, 1888, aged 65. The diagnosis was acute melancholia. General condition remained fair until Nov. 15, 1911, when she was placed in bed. Physical examination revealed chronic endocarditis and a mass in the right iliac region which appeared to be adherent to the fundus and right uterine adnexa. On account of a thin abdominal wall the mass was easily palpable and the rough outline discernible. A diagnosis of calcified fetus was made. The patient died December 16 from pulmonary edema.

Necropsy.—December 16, by Drs. Davies, Wardner and Smith revealed pulmonary edema, the mitral valve admitting tips of four fingers, forty-two gall-stones of assorted sizes and the mass in the right iliac region. The uterus and left tube showed senile changes. The right tube was imbedded in the mass with the exception of the fimbriæ, which projected anteriorly and to the right of the mass. On removal the tumor weighed 13½ ounces, was apparently of about four to five months' development and was embedded in caseous material, showing direct attachment to the tube.

Comment.—I am unable to state positively whether the condition was one of an abdominal or a ruptured tubal pregnancy but am of the belief that the condition was a rare one of a ruptured tubal pregnancy continuing growth.

The patient's age at death was 88 years. She was in the hospital twenty-three years and removal of the lithopedion about forty-three years after the menopause led me to the belief that the condition had existed for probably about sixty years. Cheston, Barnes, Chiari and others have reported cases existing for fifty years or longer and this case is of sufficient age to justify recording.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

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H. K. Mulford Co., Philadelphia.

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Hunter on the Value of Anatomy.—"Anatomy is the only solid foundation of medicine. It is to the physician and surgeon what geometry is to the astronomer. It discovers and ascertains truth; overturns superstition and vulgar error, and checks the enthusiasm of theorists and of sects in medicine, to whom perhaps more of the human species have fallen a sacrifice than to the sword itself or pestilence."—William Hunter.

Therapeutics

NOCTURNAL ENURESIS IN CHILDREN

This troublesome condition causes much distress to the child and the family, and yet the physician many times feels hopelessly incompetent to treat it. Dr. John Ruhräh (*Am. Jour. Med. Sc.*, February, 1912) gives tables of the etiologic factors, and of the many suggested treatments. The list of causes is valuable, for, if a cause can be determined positively, the treatment becomes immediately apparent.

Perhaps one of the most frequent causes is carelessness on the part of the parents in allowing the child to drink largely in the early evening and then expecting it to sleep, without being awakened for urination, from 7 or 8 p. m. until 7 or 8 the following morning. In other words, the child, with a small bladder, is expected to hold his urine for a period that would be almost impossible for an adult; and the habit of wetting the bed continues, even when the cause is removed.

Another very common cause of this enuresis is local irritation, whether from an inflammation, from an elongated or adherent prepuce in the boy or from an adherent clitoris in the girl, or from actual balanitis or vulvitis. Rectal irritations, as from pin-worms, is another cause.

Dietary mistakes, as feeding the child too rich, irritant food, food that digests poorly, or food that causes intestinal indigestion, may cause bed-wetting by making the urine irritant; or gas in the intestine may so press on the bladder as to produce the same result. Also, even with care in the diet, the urine may be hyperacid, or it may be alkaline. Either condition can readily be discovered by analysis of the urine. A hyperacid urine should cause meat to be removed, at least temporarily, from the diet, and the diet to be made simply milk and cereal for a time, with possibly the administration of some drug to alkalize the urine. If the urine is alkaline, this should be remedied by the administration of a drug to render it acid.

There being no apparent local reason or dietary reason for the nocturnal enuresis, the nervous condition of the child should be very carefully studied. Children who are not suspected of epilepsy may have such slight attacks at night as to be unnoticed except for the fact that the urine is involuntarily evacuated. Nervous irritabilities, nervous excitement, or some abnormality of the spinal cord may be found to be a cause of the trouble; or an insufficiency of the sphincter muscle of the neck of the bladder may seem to be the reason why the urine cannot be long retained.

The object of Ruhräh's paper was more especially to call attention to the fact that nocturnal enuresis, besides being caused by the conditions above named, may be caused by adenoids and by insufficient thyroid secretion. It is not unusual to find nocturnal enuresis ceasing after a necessary operation for adenoids. This is, perhaps, because the more quiet, restful sleep that the child obtains causes a better tone and less irritability of the bladder.

It is not so clear just why insufficient thyroid secretion should allow nocturnal enuresis, but other signs of insufficiency of the thyroid, such as subnormal temperature, lack of growth, and a tendency to become fat and flabby, may be associated with insufficiency of the bladder and incontinence in children. It is quite possible that this, however, is more a mental indifference to the calls of Nature, and therefore not quite to be classed with true, simple, nocturnal enuresis. It is a fact, however, that these children who need thyroid and are given it, do improve as to their ability to retain their urine.

Before deciding on the proper treatment, the child must be carefully examined in every respect, and the urine must be carefully examined. Any kidney inflammation, diabetes, hyperacidity or alkalinity—any of these suggests the line of treatment necessary in the given case of enuresis.

If the urine is too acid, potassium citrate, combined with a modified diet, as suggested above, is the best treatment.

℞	Gm. or c.c.		
Potassii citratis	5	or	ʒiss
Aquæ menthæ piperitæ	100		fl.ʒiv

M. et Sig.: A teaspoonful, in water, three times a day, after meals.

The above prescription is for a child 5 years old, and the amount can be temporarily doubled, if deemed advisable. But a diet without meat and composed mostly of milk and cereal would almost alone correct the condition.

If the urine is alkaline, the following is the treatment. Leave meat in the diet, and give:

℞	Gm.		
Hexamethylenaminæ	3	or	gr.xlv

Fac chartulas 20.

Sig.: A powder, dissolved in one-fourth of a glass of water, four times a day.

The above is for a child 5 years of age.

If worms of any kind are discovered in the stools, these should be treated. Constipation should be prevented.

Local inflammations should be properly treated. Circumcision should be done when needed; and the clitoris should be freed from adhesions. This last alone has often cured young girls, even in their teens, of nocturnal enuresis.

Raising the foot of the bed; tying a knot under the child so that he will not lie on his back; restricting the liquids taken in the late afternoon and early evening; waking the child up once, at least, in the middle of the night to urinate, are all simple, every-day methods of considerable value.

Obstructive adenoids, of course, carry with them the indication for operative treatment, and indications of subsecretion of the thyroid present the necessity for thyroid medication.

If there is believed to be an insufficiency of the sphincter of the bladder, various electric applications may be tried, and some with benefit principally the faradic current. Sometimes the cold sound is of benefit.

It has been thought at times that ergot as a tonic to the smooth muscle fiber of the bladder was of value, and it has seemed many times to be successful. The dose of the fluid-extract of ergot for a child 5 years old would be, perhaps, 20 drops, three times a day, in water, after meals.

Atropin, given at night, has also seemed of benefit as possibly relieving the irritability of the neck of the bladder and thus preventing the undesired contraction of the bladder. The dose for a child 5 years of age would be about 1/400 to 1/300 of a grain, given once a day, an hour or two before bedtime. There is no preparation of belladonna that will have any other action than that of the atropin.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 DEARBORN AVENUE . . . CHICAGO, ILL.

Cable Address . . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

[*For other information see second page following reading matter*]

SATURDAY, APRIL 13, 1912

PHRENOLOGIC TENDENCIES IN THE INTERPRETATION OF MENTAL PHENOMENA

The correlation of structure and function in organisms has many features which appeal to any one who observes the activities of a living individual. What is more natural than to expect that organs which differ structurally should have unlike functions? And in truth the view finds a substantiation in the familiar facts of physiology, which show a remarkable differentiation of animal structure in adaptation to specific uses. Do not muscle and gland, nerve and connective tissue fiber, exemplify in their anatomic individuality the unlikeness of the uses to which they are put in the body? Accordingly we have come to associate certain physiologic phenomena with definite types of structures.

The attempt to connect mental processes with special anatomic structures had its beginning years ago. In a sense it was exhibited in the phrenology of earlier days. Some localized part of the brain was presumed to be concerned with each of the different mental states or faculties which went to make up the "units" of the mind. When more precise experimental studies on the cerebral localization of motor and sensory processes widened our knowledge of brain phenomena, the facts elicited by investigations like those of Fritsch and Hitzig, Munk, Goltz and others were hailed by some as conclusive indications of the essential validity of the hypotheses underlying phrenology. Clinical observations taken in connection with post-mortem findings in the brain were also drawn on to support the claims of psychic localization. Flechsig's well-known studies were applied to strengthen the doctrine of an anatomic localization of mental faculties. Histologic investigations have been strained to furnish evidence for some differentiation correlated with assumed independent activities of individual parts of the brain. To quote a recent writer: "There were some who disputed the functional dismemberment of the brain, and withstood the establishment of spatial localizations for definite mental functions, but their voices were not listened to, or their facts were denied, or their arguments disregarded. They contended that the clinical and physiologic facts gave no warrant for a localization in parts of the cerebral cortex of mental functions as such, and furthermore they pointed out that the cortical centers did not operate independently, and that functions could not be considered apart from the totality of the elements involved. The schematism of phrenology was, however, too alluring; it gave a definiteness to diagnosis, and it satisfied certain other practical and theoretical desires."[1]

It is not always clearly kept in mind that the possible connection of brain lesions with motor, sensory and associational derangements by no means demonstrates that psychic processes are definitely localized. Professor Franz of the Government Hospital for the Insane at Washington has taken pains, in a recent address from which we quoted above, to express his conviction that mental processes are due to the activities of the brain as a whole. The individual parts "do not work independently; they work interdependently, and it is because of the possible functional or anatomic connections that certain types or kinds of mental states are more in evidence than others."

Precisely because we have been encouraged to associate function with structure so definitely in other fields, a similar tendency to connect mental abnormalities with definite brain-centers is current. But a reaction has set in; and the protest of the opponents has been formally promulgated and is quoted here from Franz as a "sign of the times" rather than as a final pronouncement on the subject. "All that we do know is that certain disturbances of the brain are accompanied by certain mental abnormalities, and that similar mental abnormalities are produced by or accompany diverse lesions. We have no facts which at present will enable us to locate the mental processes in the brain any better than they were located fifty years ago. That the mental processes may be due to cerebral activities we may believe, but with what anatomic elements the individual mental processes may be connected we do not know. Notwithstanding our ignorance, it would appear best and most scientific that we should not adhere to any of the phrenologic systems, however scientific they may appear to be on the surface. We should be willing to stand with Brodmann, believing that mind is a function or an attribute of the brain as a whole, or is a concomitant of cerebral operations, but I at least am unwilling to stand with the histologic localizationists on the ground of a special mental process for special cerebral areas or for special cerebral cell groups."

FOOD WASTES IN PUBLIC INSTITUTIONS

In these days of scientific management it is a hopeful sign to note the tendency toward economical efficiency which is spreading to public institutions. Any charity which is characterized by inconsiderate extravagance defeats its widest usefulness; and organized benevolence which is forgetful of the limitations of human helpfulness does not deserve a continuance of public support.

1. Franz, S. I.: The New Phrenology, Science, March 1, 1912, p. 321

V. 5
1912

We shall not open the argument as to whether the great increase in public charges in the past decade is justifiable or to what extent the protection of the unfit and the care of the human derelict is an unavoidable duty. No one will deny the sacrifices which the medical profession has always freely made in the aid of the helpless. The solution of the broader problems of the rights and obligations of the dependent must be left to the sociologist.

Public institutions — asylums, prisons and the like — are here to stay and their financial resources must be carefully husbanded. In many departments this is being done with marked success. The efficiency of various parts of the plants is pushed to its utmost. Every ton of coal is weighed, every pound of ashes is taken into consideration in the attempt to secure a maximum of energy in the forms desired. But in one direction which concerns no small share of the total expenditure, namely, the food problem, less consideration has hitherto been brought to bear than the best interest of all concerned really demands. Of course, numerous exceptions to this broad statement might be cited in noteworthy individual cases.

Broadly speaking, however, our contention is correct. The reason for this apparent neglect of conservation in the handling of supplies is partly to be sought in misguided sentiment. There is an impression easily spread that economy in food management is synonymous with enforced starvation and mistreatment; so that the guardians of public dependents are unwilling to face hysterical charges of the abuse of their wards.

Economy of the sort here referred to means not only the substitution of cheaper, yet adequate nutrients for dearer foods; it means likewise a careful consideration of the problem of waste. The kinds and proportions of food to serve are large questions about which there is none too much information at the present time. The disposal of sewage and garbage is being carefully studied, but little systematic inquiry has been made in this country into the means of reducing the amount of waste which is disposed of through these channels. The wide disparity in the amounts of food used in similar institutions has led Henry C. Wright of the Russell Sage Foundation to institute an investigation at King's Park State Hospital to determine to what extent kitchen and dining-room waste could be regulated and reduced. Uneaten food was separated into "usable" and "waste" and carefully weighed or measured. These records served as a guide from time to time for the perfection of the service. Mr. Wright says of the classification thus introduced: "The results of its operation have been pronounced . . . a redistribution was made, resulting in a much better feeding of the working patients. . . . Thus far there has been no attempt to cut down the total amount of food served. The excesses of one department have been transferred to other departments where less waste was noted. It is highly probable, however, that after the system has been in operation longer the aggregate amounts of certain foods will be reduced. The waste indicates that such a reduction would be safe."[1]

The same story comes from other sources. At the Massachusetts General Hospital an inspection of waste in garbage led to a saving of $5,000 in one year. Another aid to economy is the application of expert knowledge of dietetics. At the Bay View institution in Baltimore, this has led to the introduction of a successful dietary for 7½ cents per day. Quoting Mr. Wright: "Every state needs to do more than it is at present doing for its sick and dependent. Unless capital and operating costs can be reduced, expansion will be exceedingly slow. If the taxpayers become convinced that their money is as carefully expended as in private business — yes, more carefully — funds for enlargement of the work will be readily granted."

JENNER'S DISCOVERY OF ALLERGY IN SMALL-POX AND COW-POX

The discovery by Koch that in the tuberculous guinea-pig a second injection under the skin of bacilli, in place of causing a progressive infection, leads to necrosis and sloughing at the point of inoculation, and his further observation that only the tuberculous organism reacts in a typical way to the soluble tubercle substance, are currently regarded as the first demonstration of a specific hypersusceptibility or, better, allergy in infectious diseases.

It now appears,[2] however, that Jenner in the course of his inoculations of cow-pox and small-pox very clearly recognized that the animal organism, once thoroughly influenced by the virus of these diseases by passing through an attack of either one, may respond to the cutaneous application of the virus, if made even years afterward, by an evanescent, early local reaction, a "sudden cuticular inflammation." Reflecting on the significance and cause of this interesting phenomenon, he remarks that "it becomes almost a criterion by which we can determine whether the infection will be received or not," and that it seems as if a change in the vessels of the skin may be produced by either small-pox or cow-pox whereby a "disposition to sudden cuticular inflammation" on the application of variolous matter is established. Jenner consequently virtually recognized in this early reaction the evidence of a previous infection and his interpretation of the nature of the reaction approaches in a general way very closely that in vogue at the present time.

This remarkable observation and the comments thereon testify convincingly to the masterly thoroughness and keenness exercised by Jenner in his great work. It is a striking commentary on the prevalent utter neglect of the real classics of the literature of scientific medicine that Jenner's observation should have passed seemingly

1. Wright, H. C.: Some General Principles Applicable to the Purchasing and Handling of Supplies for Public Institutions, Jour. Home Economics, 1912, iv, 26.
2. Hektoen: Allergy, this issue, p. 1081.

wholly unnoticed for more than a hundred years and until several years after the early reaction was rediscovered and studied from all sides by von Pirquet, who used it as one of the foundation-stones in building up the doctrine of clinical allergy. We should study the writings of the founders of medical science because, as illustrated in this instance, hidden away in their pages may be records of observations and reflections that through the lapse of time and the growth of science may have acquired a specially suggestive and stimulating significance.

A GREAT PAPER ATTEMPTS THE IMPOSSIBLE

The newspaper which, while wishing to conserve its readers' interests, is unwilling to reject all medical advertising, has a problem for which there is no satisfactory solution. The question is sometimes asked: Why is it not possible for a newspaper so to censor its "patent-medicine" advertising that all objectionable matter is rejected and only the unobjectionable retained. The answer is: Because there is no such thing as an unobjectionable "patent-medicine" advertisement in a newspaper.

Probably one of the best examples of a newspaper whose advertising and editorial ethics are of a high order, but which still persists in accepting a certain class of medical advertisements is that of the Chicago *Tribune*. The crude, coarse, indecent "medical-specialists" advertisements are never found in this paper; the suggestive "patent-medicine" advertisement is debarred from its pages. In its acceptance of medical advertising the general rule seems to be to take only those preparations that are to be used externally, with the exception of cathartics.

As a result of this policy, the *Tribune* presents some curious anomalies. On its editorial page is a department entitled "How to Keep Well," in which Dr. W. A. Evans, formerly commissioner of health of Chicago, answers questions of general interest "pertinent to hygiene, sanitation and prevention of disease." The department is an excellent one, sane, conservative and instructive. Since its inception, however, the discriminating reader must have been led to marvel at the inconsistency between the editorial utterances and the claims made by some of the *Tribune* advertisers. A few examples will make this incongruity evident.

Under the title "Peril in Reducing Weight," Dr. Evans gave this advice to an inquirer, who claimed to have reduced his weight "forty pounds in six months":

> "You are not justified in reducing at a more rapid rate than twenty pounds a year and ten pounds would be better judgment."

Sane advice, every word of it, but possibly the *Tribune's* correspondent had felt that he was justified in reducing his weight as rapidly as he had after reading a quarter-page Marjorie Hamilton obesity cure advertisement in the same paper. Marjorie sells, it will be remembered, a drugless, dietless obesity cure (which, by the way, is neither drugless nor dietless) and appeals to *Tribune* readers as follows:

> "Fat vanishes one pound a day—Reduce fat quick with my safe and sensible no-drug home treatment."

An even more remarkable inconsistency was to be found in a recent Sunday edition of the *Tribune*. Another editorial department conducted by Lillian Russell contained the following statement regarding obesity cures:

> "Leave antifat remedies severely alone. They are positively dangerous or they are quack nostrums that accomplish nothing, but help you waste your money. The only sensible things are diet and exercise."

More excellent advice; more good sense. But alas, on the opposite side of the same page that impudent fraud, Marmola, was advertised:

> "Overfatness condemned . . . Many are trying exercises or diet, but it is certain they will find these methods are slow and undesirable. The cheapest and safest way to get in form for the Directoire mode is by means of Marmola Prescription Tablets . . . A large-sized case of these elegant little fat reducers containing a good generous supply for seventy-five cents and even this quantity should be enough to make a decided impression on your excess fat. Many have lost as much as a pound a day."

Another seeker after knowledge wrote to the "How to Keep Well" department: "I would like to know what you think is the best blood purifier." Dr. Evans very properly and naturally replied:

> "There is no such a thing as a blood purifier."

Of course there isn't. Every physician knows that; but most laymen have an undying faith in "blood purifiers." Why shouldn't they? Here we find in a recent issue of the Chicago *Tribune* the following advertisement:

> "Wonderful home remedy—Every person's blood at times becomes laden with impurities . . . If one will dissolve an ounce of Kardene and one-half cupful of sugar in one-half pint of alcohol, then add hot water to make a quart and take a tablespoonful before meals, the blood will soon become pure . . ."

A few months ago, Chicago was threatened with an epidemic of diphtheria. Rationally enough, Dr. Evans explained at some length the need of medical attention being given to every child that showed symptoms of sore throat. This excellent article closed as follows:

> "If your child has a sore throat, do not trifle with it, do not neglect it, do not attempt to 'cure it up' or cover it up."

This splendid advice was necessary because the average mother, as soon as her child shows symptoms of "sore throat," at once purchases a bottle of whatever "patent" medicine" happens to be most widely advertised in her locality. The *Tribune* at this time was carrying an advertisement of a sore-throat "cure" fraud called "Tonsiline."

> "A quick, safe, soothing, healing antiseptic cure for sore throat . . . Tonsiline cures sore mouth and hoarseness and prevents quinsy and diphtheria."

V. 58
1912

These examples of inconsistency between the editorial and advertising departments of a great paper are not given for the purpose of criticizing the Chicago *Tribune*. They are merely quoted for the purpose of showing how impossible it is for even a careful and conscientious newspaper to avoid making itself ridiculous so long as it accepts "patent-medicine" advertising. There can be no effective censorship of nostrum advertising. Whenever a "patent medicine" is advertised in truthful and unexaggerated language, that "patent medicine" will go out of existence. Nostrums can flourish only on falsehood and deception. There is no half-way course. The newspaper that accepts "patent-medicine" advertising, even though it confines its acceptance to nostrums of a certain type, may just as well make up its mind that, so far as those products are concerned, it is deceiving its readers and perpetrating a greater or less fraud on its subscribers.

BERIBERI, RICE AND BEANS

In a recent number of THE JOURNAL[1] attention was directed to some of the very recent investigations on the relation of rice to beriberi, and it was pointed out that the etiologic factor in this disease under conditions in which polished rice forms the essential basis of the dietary is most probably the lack of certain substances which are present in other foods and notably in polishings of the rice. It was further stated that a type of polyneuritis can be induced in fowls by feeding them on milled rice. Drs. Chamberlain and Vedder, members of the United States Army Board for the Study of Tropical Diseases as they Exist in the Philippine Islands, have stated that the pathology and symptom-complex of the two diseases, i. e., polyneuritis gallinarum and human beriberi, are practically the same with the exception of the fact that edema is commonly observed in beriberi and only rarely found in the multiple neuritis of fowls. The similarity, they remark, is so striking that it is hard to avoid the conclusion that the two conditions are due to the same pathologic process causing, as might quite naturally be expected, slightly different manifestations in diverse species. The surprising thing is not that there are minor differences in symptomatology, but rather that the similarity is as great as it is. This lends great importance to the use of fowls in the experimental study of the etiology of beriberi.

In our earlier comment we noted that Dr. Casimir Funk of the Lister Institute, London, had isolated from rice polishings a relatively simple substance curative in very small doses for the polyneuritis of the fowl. Since then the *Philippine Journal of Science* has brought additional reports of progress in a similar direction by American workers[2] to whom we are glad to bring recognition. They appear to have obtained sufficient information with regard to the nature of the curative agent to attempt to identify it by direct methods of chemical analysis. We shall watch for the complete solution of what has now become a chemical problem, keeping our attention centered now on London, now on Manila, with an interest as keen as that with which others have followed the race for the pole.

It is of significant moment that according to Hulshoff-Pol[3] and Chamberlain and Vedder,[4] decoctions of white beans cure polyneuritis in fowls. The same substance which is present in the rice millings, or a similar substance, is present in a decoction of ordinary white beans; in fact, bodies corresponding to this description are found among decomposition products of the proteins. These facts are of importance, since they suggest that beans may be used as a preventive against beriberi in the rations of our native Philippine troops, native prisoners and others whose diet by preference consists largely of rice. As the Army investigators remark: "If the natives do not happen to care for mongos, or the other articles introduced into the ration for the purpose of preventing beriberi, they will not eat them, but will live on an almost exclusive diet of rice; but the man, native or white, who does not relish well-cooked beans is hard to find."

INCREASED PAY IN THE PUBLIC HEALTH SERVICE

In reviewing the annual report of the Surgeon-General of the Public Health and Marine-Hospital Service[1] mention has been made of the so-called personnel bill now pending before the House of Representatives, designed to make the salaries of officers of the Public Health and Marine-Hospital Service equal to those of the Army and Navy Medical Corps. A moment's consideration shows the importance of this measure.

The Public Health and Marine-Hospital Service is the single national agency charged with the prevention of the introduction of contagious diseases into the country and their spread in interstate traffic. It has demonstrated its efficiency and proved its right to confidence and support in many a bitter campaign against disease. Not alone has its work resulted directly in saving life and improving public hygiene and sanitation; it has also saved the country an inestimable sum by preventing epidemics. As an illustration, during the three months of the New Orleans yellow-fever epidemic in 1905 the service saved the nation $100,000,000 as compared with the state of affairs in 1878, which caused a loss of more than a hundred millions in the Mississippi Valley.

The officers of the service are exposed to continual danger because of their contact with contagious diseases,

1. THE JOURNAL A. M. A., Feb. 24, 1912, p. 557.
2. Chamberlain and Vedder: Second Contribution to the Etiology of Beriberi, Philippine Jour. Sci. (B), 1911, vi, 395.
3. Hulshoff-Pol, J.: Polyneuritis gallinarum en beriberi, Geneesk. Tijdschr. v. Nederl. Indie, 1909, xlix, 116.
4. Philippine Jour. Sci. (B), 1911, vi, 401.
1. THE JOURNAL A. M. A., March 30, 1912, p. 942.

and because their duties take them to the most insanitary and unhealthy localities in the country. Many of them have succumbed to disease contracted in the line of duty. Yellow fever has claimed fourteen, tropical dysentery five, typhoid four. Typhus fever and cholera likewise have taken their toll. The excellent scientific work of the service has been referred to in these columns repeatedly.

The commissioned officers of the service constitute about 1.5 per cent. of the total number of commissioned officers in the United States service. Since 1889 all of the other 98.5 per cent. have received substantial advances in their pay amounting to 20 per cent. and upward. In addition they have been given faster promotion, equivalent to a further 20 per cent. increase in pay. The Marine-Hospital Service officers alone have received no increase, in face of the fact that their duties are equally hazardous, or even more so, as proved by the character of their work and the morbidity rate of disease among them.

In the first session of the Sixtieth Congress the Senate passed a bill which included all the features of the present personnel bill, but failed to pass the House. In the third session of the Sixty-First Congress, the House passed a similar bill which in turn was rejected by the Senate. In the same session an amendment to the Sundry Civil Bill was adopted by the Senate, embracing the same features, but it was stricken out in conference. Finally the present bill[2] has been passed by the Senate in the present Sixty-Second Congress. Thus it is seen that the provisions of this bill have at different times been passed favorably by both the Senate and the House.

The bill has now been reported favorably and without amendment to the House by the Committee on Interstate and Foreign Commerce, and is No. 64 on the union calendar.[3] The bill would necessitate an additional appropriation of about $100,000 annually. At this really insignificant figure, Congress can insure the continued efficiency of the service, enable it to improve the character of its work, and make it more attractive to young physicians. Its requirements are of the highest, and to secure the high-class men necessary to carry on its work, a salary must be paid which is adequate to meet the demands of the increased cost of living. Small indeed is the increase asked for the Marine-Hospital Service as compared with the millions invested in a new battleship. True economy calls for the passage of the bill.

It is believed that the merits of the bill are so strong that it would receive an overwhelming majority if brought to a vote, and it is to be earnestly hoped that it will soon be brought to a vote and passed. Justice and the interests of the nation alike demand its passage. No semblance of valid argument has been raised against it. Partisan politics least of all should be allowed to obstruct its passage.

2. Senate bill No. 2117, Sixty-Second Cong., first session.
3. Report No. 233, H. R., Sixty-Second Cong., second session.

Current Comment

THE INTERRELATIONS OF RESEARCH AND PRACTICE

In a recent address before the American Society of Animal Nutrition, Professor Armsby struck a keynote which deserves to be resounded quite apart from the immediate circumstances of the original. He spoke of the wide gap which still exists between the work of the student of the science of nutrition and that of the expert in the art of feeding. This obvious weakness in any broad scheme of scientific pursuits applies with singular aptness to the situation in many domains of the field of medicine. It is, perhaps, the old question of theory versus practice which is here suggested. This controversy, it is safe to say, has long since lost all serious significance — if, indeed, it ever possessed any. The investigator in pure science is, in the long run, as responsible for the advances in practice as is the individual who devotes himself to so-called applied science and arts. As Armsby points out, "both have sought to serve the public and both have done creditable work, but their labors have not always been as mutually helpful as they might have been. The scientific man has been too exclusively scientific and the practical man too exclusively practical and the result has been unfortunate for both." We may properly ask what can be done to bring the two groups into more efficient and mutually helpful relations—to integrate the deductions of the investigator and the experience of the practitioner. "Mere sympathy with research amounts to little more than benevolent toleration." The practitioner has an important function in relation to the student of science which he can carry out without departure from his own field. It consists not merely in a sympathetic attitude and hearty encouragement, but in a further earnest attempt to make scientific work of greater practical significance by appreciation, by intelligent criticism, and above all by the attempt to convert the achievements into actual practice. The practitioner who is not himself an investigator should be enough of a student to understand and to apply critically his colleague's findings. Such men are needed; they not only serve to guard the investigator against unsuspected errors, but occasionally also indicate the real significance of a scientific discovery. There are few minds equally suited to pure research and practice. It is highly important, however, that the two types should be brought into vital contact, without disputing the fundamental fact that "the search for knowledge with exclusive reference to its application is generally unrewarded."

EXAGGERATION IN REPORTING MEDICAL ADVANCES

Unfortunately advances in scientific medicine are frequently heralded as being of much more value and importance than they can possibly prove to be. Sometimes this is due to the desire of the newspaper reporter to make a good story, but it is occasionally suspected that medical men are not wholly innocent in the matter. W. M. Barton[1] analyzes the cause of this tendency:

1. Barton, W. M.: Washington Med. Ann., January, 1912, p. 314.

Men who are deeply thoughtful, thorough students appreciate the relative importance of new discoveries, and in the majority of instances the charge of exaggerating the importance and effect of their work cannot be sustained against them. "The very difficulty of carrying into execution the simplest principles of their science teaches them a demeanor of conservatism and humility. But to the dilettante or amateur in hygiene nothing is impossible in sanitary science." No human plague exists which cannot be scientifically eradicated if only the rules proposed by these neophytes are followed. Barton further points out that the public loses confidence in medical science, after finding that some of these heralded improvements accomplish far less than was promised. The thoroughly cultivated, scientific man is conservative concerning the significance of a new discovery. His experience has taught him to hesitate to make emphatic statements. He may not interest the public so much at the moment, but his wisdom and reputation will last longer.

CONGRESS ON HYGIENE AND DEMOGRAPHY

Attention has been called in a previous issue[1] to the Fifteenth International Congress on Hygiene and Demography, which will be held in Washington next September. The importance of this congress makes it fitting that we should emphasize again some of its valuable features. Demography may be defined as the study of vital and social statistics in their relation to ethnology and anthropology. This congress is of vital interest to physicians because it is quite likely to be the starting point for a wide-spread and general movement for betterment of health conditions in the United States. In connection with the congress there is being planned an extensive health exhibition, at which will be illustrated the recent progress of the public health movement in this country and its dependencies. No exhibition dealing with the general field of public health has ever been held in the United States, and consequently this exhibition is of peculiar sanitary significance. All agencies working for the promotion of public health in any of its phases are requested to contribute material for it. The congress is to be held under the auspices of the federal government. Twenty-five foreign countries and forty-three states will send delegates, and there will be a large attendance in this country of those specially interested in hygiene. It furnishes a peculiar opportunity for all such persons, including state and municipal health officers, to get together, correlate their work, get new ideas and enlarge their point of view. It promises to be the most important event of the kind that has occurred in the United States. Its particular object is to extend the knowledge and improve the practice of vital statistics and hygiene in the countries which participate. The congress is organized in two divisions. The Division of Hygiene includes eight sections, covering the topics of hygienic microbiology and parasitology, dietetic hygiene, the hygiene of infancy and childhood, including the prevention of infant mortality, and school hygiene. This division will also cover industrial hygiene, the control of infectious diseases, hygiene of traffic and transportation, and military, naval and tropical hygiene. The Division of Demography will consider such topics as the development of vital statistics as a science, statistics of pauperism and accidents and of marriage and divorce, and other practical applications of demography to broad medical problems.

1. Fifteenth International Congress on Hygiene and Demography, THE JOURNAL A. M. A., Dec. 23, 1911, p. 2087.

SQUIBB & SONS' FAIR ACTION

A month ago[1] we published a report from our chemical laboratory and a contribution from Dr. Pusey on Thoremedin, manufactured by E. R. Squibb and Sons. On page 1135 of this issue we print a letter from this firm which deals with the matter in a way that cannot fail to be satisfactory to the medical profession and a credit to the old name of Squibb. The letter explains — and in view of the long and excellent record of the house the explanation should be accepted—that the composition of Thoremedin was kept secret only because the preparation was deemed in the experimental stage and that it was the intention of the firm to submit it in due course to the Council on Pharmacy and Chemistry for consideration. The letter further shows that E. R. Squibb and Sons undertook the manufacture of Thoremedin only after extremely favorable reports had been received from medical men in whom they had confidence. The firm now announces that it has submitted Thoremedin to the Council on Pharmacy and Chemistry and that it will abide by the conclusions of the Council. From evidence submitted THE JOURNAL is satisfied that no change in the methods of this house has occurred and that the ideals of Dr. E. R. Squibb are still being honored and lived up to. We feel convinced that whatever mistake Squibb and Sons have made in regard to Thoremedin has been one of judgment and not of intent. In consideration of their explanation and their fair action in this matter they should continue to receive the full confidence of the medical profession.

"THERAPEUTIC EFFICIENCY"

The gentlemen who are coming so valiantly to the defense of proprietary frauds of the so-called ethical variety make much of the fact that the rejection of a product by the Council on Pharmacy and Chemistry is no proof that the product itself has no therapeutic value. As one of these champions of proprietary humbugs says:

> "I could give you numerous illustrations of remedies that have been attacked by the Council for reasons not affecting at all the therapeutic efficiency of these drugs."

So could we! "Therapeutic efficiency" is by no means the only element to be taken into consideration in determining whether a product is or is not a fraud. Suppose an unscrupulous individual with no knowledge of medicine or pharmacy, but with an hypertrophied advertising sense conceives the idea of exploiting an "ethical" proprietary. He takes equal parts of quinin sulphate and starch, has them made into tablets or put up in fancy-colored capsules. He gives the mixture a catchy but meaningless name and obtains a perpetual

1. THE JOURNAL A. M. A., March 9, 1912, pp. 706, 716.

monopoly of that name under our trade-mark law. He buys advertising space freely in the so-called independent medical press. He tells the physicians of the country that his wonderful preparation is a tertiary diamin of the natural order of *Cinchonaceæ* in combination with amylose $(C_6H_{10}O_5)_n$. He recommends it for everything from soft corns to hard chancres. Has the stuff any "therapeutic efficiency"? Certainly it has. For malaria, it will be just as valuable as one-half the same quantity of quinin. True, quinin sulphate sells for 25 cents an ounce while our advertising friend asks $5 an ounce for his proprietary preparation. Notwithstanding this, it must still be admitted that it is good — for malaria. It has "therapeutic efficiency." Why then should not the Council on Pharmacy and Chemistry approve it? Why should not medical journals aid the swindler in exploiting it by sharing the profits in the fraud? This hypothetic case is no exaggeration of conditions that exist in the pharmaceutic world to-day. Hundreds of simple mixtures are sold under the most fraudulent claims. The physician does not know their composition, but because the medical journals of the country are willing to stand sponsor for these frauds, the medical profession, in many instances, seems to be equally willing to accept such products as scientific additions to the materia medica. What a farce! A simple mixture is sold under a proprietary name, its identity hidden under a mass of semi-scientific jargon, and with claims that would put Peruna to shame, and the editors of medical journals solemnly assert that the rejection by the Council of this "valuable and useful product" is an outrage. Is such a spectacle one that is likely to inspire confidence in the medical press?

A NEW TEST FOR COLOR-BLINDNESS

The detection of an anomaly so wide-spread and persistent as is color-blindness calls for effective and simple modes of recognizing the defect. Among the methods in current use schemes for matching colored objects are widely employed. These would be decidedly satisfactory if the cases of color-blindness were identical — a situation which is far from the fact. It has long been appreciated that the intensity and other features of the color must be taken into account in accurate examinations. For example, if letters of one color are printed on a background of the confusion color, an apparent match may easily be found so that one dichromic will not be able to distinguish the letters; yet another dichromic individual may read the letters quite easily because the confusion colors are not both completely within the monochromatic region of the observer. Cases of color-blindness are rarely exactly alike — hence the difficulty of the contrast devices. Dr. Edridge-Green has introduced another scheme, that of classification tests.[1] An ingenious application of the principle has just been described by him.[2] The test consists of a number of colored beads in which every variety of confusion color of the color-blind is well represented and a box with four compartments into which the beads can be dropped. The important feature is that the observer cannot see the bead after it has once been dropped into the selected compartment labeled red, yellow, green or blue. In conducting the test the examinee is told to select from the beads in front of him, which are placed on the white porcelain lining of the box, all those that are red, keeping as nearly as possible to the exact hue, but selecting those that are lighter or darker of the same color, and to drop them one by one into the compartment labeled red. The process is repeated with the other colors; and since the subject has no opportunity to compare the colors directly, he must select them according to the name which he gives to the color. Whereas the normal-sighted are able to select correct colors with the greatest ease, the color-blind will make their characteristic mistakes. Dr. Edridge-Green says that his test, like the ordinary lantern methods, will detect cases of color scotoma as well as those of ordinary color-blindness.

1. Edridge-Green, F. W.: Hunterian Lectures on Color-Vision and Color-Blindness, London, 1911, p. 66.
2. Edridge-Green, F. W.: A New Test for Color-Blindness, Proc. Physiol. Soc., Jour. Physiol., 1912, xliii, p. 34.

INFORMATION CONCERNING PELLAGRA

The discovery that pellagra is a widely prevalent disease in this country, particularly in the south, has made it a subject of unusual medical and public interest. The *Southern Medical Journal* devotes the entire March issue to a symposium of thirteen papers on pellagra, all of which were read before the Southern Medical Association last November. These, with the discussions, constitute a valuable contribution to our knowledge of pellagra. A number of these articles have been abstracted in THE JOURNAL. The papers are by physicians of the south, some of them health officers, who have been brought into very direct contact with the disease for some years. The symposium is particularly valuable in that it gives the results of the observation and conclusions of a number of different men of practical experience, rather than those of one man, as in a textbook. While the exact etiology of the disease has not been determined and no definite form of treatment devised, yet it is worthy of note that the tendency of opinion is toward a hopeful prognosis when treatment is begun before the disease is too far advanced.

GRADUATE SCHOOL OF MEDICINE AT HARVARD

About a year ago a graduate school of medicine was established as a department of Harvard University and placed under the control of the faculty of medicine. Recently Dr. Horace D. Arnold of Boston was selected as dean. The new feature of this school is not the giving of graduate instruction in medicine, since that has been encouraged by Harvard Medical School for a number of years. The action taken is a recognition that graduate instruction was important enough to justify the establishment of a separate department of the university and that this department should be developed along the same high plane as that of the other departments. With the rapid improvement that the undergraduate medical schools of this country have been experiencing, it is highly important that the graduate schools undergo an even greater development so that medical graduates will have opportunity for postgraduate instruction in medicine at least as thorough and

as scientific as that furnished in the best undergraduate medical schools. Furthermore, it is probably a fact that graduate medical instruction in this country, generally speaking, has been even more neglected than undergraduate instruction, and there is much greater need of improvement. The creation of this new department at Harvard University, therefore, is a step in the right direction.

Medical News

ALABAMA

Medical Alumni Organize.—The Mobile Alumni Medical Society of the School of Medicine of the University of Alabama was organized March 25. Dr. John O. Rush was elected president; Dr. P. O. Chaudron, vice-president; Dr. Eugene Thames, secretary, and Dr. M. J. Bancroft, treasurer.

State Medical Meeting.—The Medical Association of the State of Alabama will hold its annual meeting in Birmingham, April 16-19. The entertainment committee has made elaborate plans for the association, and invitations have been mailed to every physician in the state, enclosing a card giving privileges to all the clubs of the city during the meeting. Luncheons, receptions, banquets and barbecues have been arranged. Medical and surgical clinics will be held at the different hospitals. Elaborate entertainments are planned for the ladies in attendance. The meetings of the association will be held at the Jefferson theater and the money received for concessions in the exhibit hall will be applied to the entertainment fund of the association.

COLORADO

Physicians in Automobile Crash.—Drs. H. H. Martin and Norbert K. Knoch, Denver, were seriously injured in a collision between automobiles, March 28.

Semi-Annual Clinics.—The Medical Society of the City and County of Denver held its semiannual clinics in the various hospitals in the city, March 29 and 30.

Tuberculosis a Reportable Disease.—The State Board of Health has issued a circular declaring tuberculosis a communicable and infectious disease and requiring health officers to report all cases in their districts.

Fresh Air Rooms in Schools.—Two of the public school buildings of Denver have rooms with one side completely open, with removable windows which extend from the floor to the ceiling, so that the room may be closed during the severest weather.

Change of Name.—The Colorado State Association for the Prevention and Control of Tuberculosis has filed articles of incorporation as the Rocky Mountain Health Association. The intention of the association is to enlarge its work so as to include a campaign against all communicable diseases. The same officers were retained.

Christian Sanatorium Planned.—A group of local professional and business men is planning to establish a large sanatorium in Denver, to be called the Christian Sanatorium. The enterprise will involve an investment of at least $1,000,000, will be religious in its conduct and Protestant in creed. Dr. Henry S. Keyes, Los Angeles, Cal., is the originator of the project, which is said not to be organized for profit.

FLORIDA

State Association Meeting.—The Florida Medical Association will hold its annual meeting in Tampa, May 8, and the State Board of Medical Examiners will be in session in that city May 6 and 7.

New Building for State Board.—The new building for the State Board of Health at Jacksonville is nearing completion. It is a two-story structure, the lower floors of which will be equipped with laboratory service, the upper floor being used as headquarters and offices.

ILLINOIS

Chicago

Personal.—Dr. Edmund J. Doering has returned from a trip to the Mediterranean.——Dr. W. H. Wilder has sailed for Europe.

Clean Milk.—Drs. Robert A. Black, R. R. Ferguson and Frederick Tice, members of the Chicago Medical Society's Milk Commission, discussed clean milk, its production, transportation and distribution, at a public meeting in the public library building, April 6.

Good Work by a Physician Alderman.—Dr. Willis O. Nance, the only physician in the city council, recently reelected by a majority of more than 1,700 votes, introduced an ordinance providing for the report to the commissioners of health of all cases of sore eyes in babies. This was passed by the council and signed by the mayor. He introduced ordinances providing for the abolishment of roller towels in public lavatories, and for the more stringent control of the sale of cocain and narcotic drugs, both of which were passed. He also introduced an ordinance prohibiting the sale of hypodermic syringes to persons other than physicians, but this was not passed by the council, as the corporation counsel decided it to be unconstitutional, notwithstanding the fact that such a law for the same purpose was enacted by the New York legislature a little over a year ago.

IOWA

Personal.—Dr. David E. Beardsley has been appointed city physician of Cedar Rapids.——Dr. C. C. Shope, Des Moines, physician of Polk County, resigned April 1.——Dr. Sydney H. Smith, Council Bluffs, was painfully injured in a collision between his automobile and a trolley car, March 31.

Homeopathic College Merged.—The board of education of Iowa has merged all the chairs of the College of Homeopathic Medicine with those of the College of Medicine and Surgery of the State University of Iowa excepting two chairs, one of homeopathic medicine and the other of homeopathic materia medica and therapeutics.

Clinics for Drake Alumni.—The Drake Medical Alumni Association, Des Moines, has arranged a two-day clinic for its members, to be held April 17-18. The clinics will be held in the Mercy and Methodist hospitals and at the Medical College Building. The address of welcome will be given by President H. M. Bell and the response by Dr. George W. Newsome, Indianola. Dr. George F. Jenkins, Keokuk, will speak on the "Early Medical History of Iowa"; Dr. Ben C. Everall, Waterloo, on "Salient Points in Diagnosis and Treatment of Urinary Diseases," and Dr. Frank M. Fuller, Keokuk, on "Rheumatism in Children." After the close of the program a buffet luncheon will be served. On the second evening the annual banquet will be held and Dr. Charles F. Smith, Des Moines, will preside as toastmaster. The dean, Dr. W. W. Pearson, will respond to the toast on "The Future"; Dr. David S. Fairchild, Clinton, to "The Past," and Dr. C. F. Wahrer, Fort Madison, will speak on "The Things We Ought to Do." Special work will be provided in the various laboratories for visiting members, if they so desire. All arrangements are in the hands of Dr. Elmer B. Mountain, 619 Walnut Street, Des Moines.

MARYLAND

Baltimore

Superintendent's Salary Increased.—The salary of the superintendent of the insane department at Bayview Hospital has been increased from $1,500 to $2,000.

Thayer Declines Call.—Dr. William Sidney Thayer, professor of clinical medicine in Johns Hopkins Medical School, has declined the call to a similar chair in Harvard University.

Annual Meeting of State Society.—The annual meeting of the Medical and Chirurgical Faculty of Maryland will be held in Baltimore, April 23-25. The annual oration will be delivered by Dr. Albion W. Hewlett, professor in the University of Michigan, Ann Arbor, on "High Blood Pressure." Dr. Harry Friedenwald will present to the society, on behalf of the committee, the "John M. T. Finney Fund for the Advancement of Surgery." The scientific session on April 25 will be devoted to "Septic Sore Throat." At the smoker, April 24, the newly organized orchestra of the society will render selections.

Personal.—Dr. Adolf Meyer sailed for Europe, March 16.——Dr. Thomas McCrae, associate professor of medicine in Johns Hopkins Medical School, has been elected to the chair of medicine at Jefferson Medical College, vice Dr. J. C. Wilson, resigned, and will enter on his duties in October.——Dr. William Simon, Catonsville, sailed for Panama and Central America, April 6.——Dr. Charles E. Simon has purchased from Dr. John C. Hemmeter his former residence on Linden Avenue.——Dr. D. W. Cathell has sold his residence on North Charles Street and has taken apartments with his son at the Emerson hotel.

MASSACHUSETTS

Request Appropriation for Contagious Ward.—The trustees of the Boston City Hospital have requested an appropriation of $300,000 for a new contagious ward.

Hospital Fund Assured.—A week's campaign has brought pledges of the $100,000, which is to assure Melrose a new city hospital. Clock dials and team work were the successful methods employed.

Cancer Hospital Opened.—The Collis P. Huntington Memorial Hospital, connected with Harvard Medical School, was opened with formal ceremonies, March 26. The hospital is devoted solely to the care of cancer patients and is under the charge of the cancer commission of Harvard University.

Personal.—Drs. Henry A. Christian and Francis W. Peabody sail for Europe, April 30.——Dr. Thomas F. Leen will, it is reported, succeed Dr. Christian as physician in chief of Carney Hospital, Boston.——Dr. Patrick H. Mullowney, V.S., has been reappointed health commissioner of Boston and Dr. Francis J. Keaney a trustee of the City Hospital.

District Nurses' Work.—The Instructive District Nursing Association of Boston has made during the past year, 112,018 visits to 9,932 patients at an expense of $49,126; of these 3,391 were maternity cases. Earnest efforts are being made to raise a $100,000 twenty-fifth anniversary fund, which will permit the necessary expansion of the work, $59,645 of which has already been raised.

Ask Appropriations.—The trustees of the Boston City Hospital have asked for an appropriation of $5,000 to establish a tuberculosis clinic. They also ask for a similar appropriation to start an orthopedic clinic in view of the large number of deformities found by the recent physical examination of school children of the city. For enlarging the south or contagious department, an immediate appropriation of $297,000 is required.

At the State House.—The Committee on Ways and Means has been urged by the farmers to appropriate a large subsidy to encourage them to produce milk. They claim that there are 15,000 less cows in the state than there were five years ago owing to the "persecution of milk inspection."——The Committee on Public Health and Agriculture, sitting jointly, has rejected the Ellis Milk Bill which medical men wanted and voted to report in favor of the Meaney Bill. This creates a new milk board, of six, three appointed by the State Board of Health and three by the State Board of Agriculture. The Cattle Bureau, a department of the State Board of Agriculture, will be in charge of the barns, and local boards of health will look after the sale of milk within their own territory under the control of the new Milk Board.——After an adverse report by the Committee on Public Health the optometrists secured the substitution of a bill favorable to them, and its reference to the Ways and Means Committee.——The Committee on Public Charitable Institutions has reported in favor of an appropriation of about $110,000 for the enlargement of the Worcester State Hospital for the Insane.——A bill regulating the construction, sanitation, overcrowding, etc., of tenement houses in towns has received the approval of the Committee on Public Health.——The Worcester State Hospital for the Insane is to be entirely removed to the Grafton State Colony by Jan. 1, 1915, if the present plans already approved by the trustees are carried out. The expense at Grafton, about $400,000, will be largely met by the sale of the Worcester property.——The bill allowing for the registration of dental nurses to assist the dentists in their work in caring for the teeth of school children has been rejected.——The bill to authorize cities and towns to provide free meals for school children, has been defeated.

MINNESOTA

Antituberculosis Campaign.—The campaign to obtain 2,500 new members for the State Antituberculosis Association started March 15, under the charge of Dr. H. L. Taylor, St. Paul.

Epidemiologic Investigation.—The Department of Epidemiology of the State Board of Health has conducted forty-four epidemiologic investigations and delivered fifteen public health lectures in various parts of the state, between October 1 last and the end of February. The work was under the care of Dr. H. W. Hill, Minneapolis, and Dr. A. J. Chesley.

Civic Association Activities.—The Civic and Commerce Association of Minneapolis is making efforts toward the prevention of incurable diseases and the reduction of unnecessary mortality. To carry out the plans for the coordination for public and private efforts for public health, a committee has been appointed, of which Dr. Archa A. Wilcox and Dr. P. M. Hall, city health commissioner, are members

Personal.—Dr. Beardsley has resigned as physician in charge of the Northern Pacific Hospital, Brainerd.——Dr. H. Longstreet Taylor has resigned from the St. Paul Antituberculosis Society.——Dr. L. J. Green has been appointed resident physician at the state reformatory, St. Cloud.——Dr. Howard Lankester, health commissioner of St. Paul, who has been critically ill, is reported to be improving.

The Work Against Trachoma.—Dr. Harrison of the U. S. Indian service, assisted by a nurse and three members of the medical force of the Indian agency, are making a house-to-house examination in the White Earth Reservation to determine the presence of trachoma and other communicable affections of the eye. Dr. Harrison will conduct similar examinations at Leech Lake, Red Lake and other Indian reservations in the state.

State Aid for Rochester.—Dr. Henry M. Bracken, Minneapolis, secretary of the state board of health, at a meeting, March 24, agreed to employ a public health officer to have charge of medical supervision of the public schools and who will devote his entire time to the care of the public health of the city, provided the municipality raises $2,000 to add to the $1,000 appropriated by the state board, making a total of $3,000, as the salary and expenses of the office.

NEBRASKA

State Board Bulletin.—The secretaries of the State Board of Health met in Lincoln, March 15, and decided to issue a monthly bulletin, of which Dr. C. P. Fall, Beatrice, is to be editor, to be printed at the expense of the vital statistics fund.

Oppose Contract Practice.—Douglas County Medical Society at its March meeting in Omaha adopted an amendment to the by-laws to become effective on and after January 1, next, which provides that "no member of the medical profession, doing either private or contract work for smaller fees than the average charge for the same class of work demanded by the regular profession in the locality where said professional services are rendered, can become or remain a member of this society. Exception to the above rule can always be made in cases of the poor and needy, who can be treated gratuitously or for fees that such patients can afford."

NEW YORK

Personal.—Dr. R. M. Pearce, Philadelphia, delivered the annual Alpha Omega Alpha address at the Syracuse Medical School on "Medical Education."——Dr. Ira F. Hart, Elmira, is seriously ill with pneumonia at his home.——Dr. Edwin V. Ross has resigned as a city physician of Rochester.——Dr. E. R. Linklater, Buffalo, is seriously ill at his home.——Dr. William P. Faust, health officer of Schenectady, has resigned on account of ill health.——Dr. Harry J. Brayton, for four years a member of the staff of the State Hospital for Incipient Tuberculosis, Ray Brook, has been appointed medical officer of the Iola Sanatorium, Rochester.——Dr. Ira A. Hix, Binghamton, is reported to be seriously ill with typhoid at his home.

Governor Protects Milk Supply and Signs Weight Bill.—Governor Dix has vetoed the Wheeler bill which would have allowed the unscrupulous milk dealer to sell milk containing solids much below the proportion the law requires. It is said that the statements of New York physicians as to the effect that this bill would have in increasing infant mortality influenced the governor to veto the measure.——On the same day that the Wheeler bill was vetoed, Governor Dix signed the Brooks bill which provides that ice, meat, meat products and butter shall be sold by weight and all other commodities, not in containers by the standard weight, measure or numerical count, and that containers must have inscribed in them the amount of their contents in net weight.

Hospital Notes.—The Rome Hospital bill, which provides for the management of the hospital by a commission to be appointed by the board of supervisors and for the care of both tuberculosis and general patients among the county poor, has passed both the senate and the assembly.——Plans have been prepared for the Tompkins County Tuberculosis Hospital, Taughannock Falls. The main building is to be 60 feet in length and 30 feet in width, exclusive of the porches. In addition to the shacks for patients, there is accommodation for four patients on the second floor of the main building.——The General Hospital site has been decided on as the most advantageous location for the Utica Tuberculosis Hospital.——The Sisters of St. Francis, Niagara Falls, have arranged for a mammoth sale of American flags on Flag Day, to increase the funds for the new hospital building, which is to cost about $300,000.

V. 58
1912

Bill Threatens Pure Milk Supply.—It was believed last January when the Board of Health of New York City changed the sanitary code so that the milk supplied to the city was divided into grades and a standard established for each that the problem of securing pure milk had been solved, so that the passage of the Wheeler bill during the closing hours of the legislature came with a shock to the New York milk committee. This bill, which has been branded as vicious by the New York milk committee, permits a person accused of selling milk of inferior quality or alleged as unfit for consumption, to produce a fair sample of the milk produced by a cow or dairy daily, his source of supply, and if the sample is up to the standard, no penalty shall be exacted. On receipt of the news that this bill had passed the legislature, the milk committee sent a telegram to Governor Dix stating that the bill was vicious and requesting a hearing. Dr. Charles E. North, New York City, secretary of the National Commission on Milk Standards, has also declared that the bill is thoroughly bad and that he will do all in his power to defeat it.

Insanity Law Changed.—The Bayne bill signed by Governor Dix on April 4, changes the name of the Commission in Lunacy to the State Hospital Commission and instead of a president there is to be a chairman to be chosen by the members of the commission. Any commissioner may be removed by the Governor for cause. The commission is authorized to establish a bureau of deportation which shall maintain a careful inspection of the methods and facilities for examining immigrants at the Port of New York. In New York City, it will be the duty of the authorities of the public city hospitals to send a nurse or medical examiner in lunacy attached to the psychopathic wards of their institutions, to any place where an alleged insane person is. If the person is found to be in need of immediate treatment, he shall be removed to the psychopathic ward for a period not to exceed ten days. The hospital commission hopes that this will obviate the necessity for police interference which frequently has an unfortunate effect on these cases. An important change provides that citizens are eligible for treatment in state hospitals whereas the old law provided that "residents" were eligible.

New York City

Harvey Society Meeting.—The annual meeting of the Harvey Society was held at the College of Physicians and Surgeons, April 10.

Fire at Hospital.—A fire in the basement of the Bushwick Hospital, Brooklyn, March 26, caused considerable excitement, but it was not necessary to remove the patients, and only small damage was done.

Pick to Speak in New York.—Professor Ludwig Pick, of the University of Berlin, has accepted the invitation of the Alumni Association of the College of Physicians and Surgeons of New York City to deliver the Middleton-Goldsmith lectures—three in number—on November 7, 8 and 9.

Personal.—Dr. George H. Mallett has been appointed gynecologist to the General Memorial Hospital.——Dr. Joseph A. Blake was operated on for appendicitis at his home in Manhattan, March 30.——Dr. Alfred C. Carpenter was seriously injured by a circular saw at his summer home in Port Jervis on April 4.——Dr. J. R. Hayden is recuperating from a recent illness.

New Polyclinic Hospital to be Opened.—The medical profession has received an invitation to inspect the new buildings of this institution which have just been completed at 341-351 West Fiftieth street from 3 to 6 p. m. on April 17, 18, 19 and 20. The hospital will be opened for patients on April 22 and the ambulance service will be inaugurated on May 1. The formal dedication of the buildings will take place on June 8, the day after the adjournment of the American Medical Association.

Christian Scientist Convicted.—Willis Vernon Cole, the Eddyist practitioner, whose first trial resulted in a disagreement, was convicted on the second trial on March 30, of practicing medicine without a license. In making the charge Justice Seabury said that one who held himself out by sign, card, or public advertisement as being able to cure, treat, or prescribe for any human disease, pain, or deformity, or ailment and who maintained a public office to which persons might come for treatment and who receives a fee, is engaged in the practice of medicine under the meaning of the law. He said further that, even though surgery was not resorted to and no drugs given, and even though the person so holding himself out engages in prayer, he is engaged in the practice of medicine under the meaning of the law. Cole was fined $100. The case was appealed.

Health Records.—The Court of Appeals has handed down a decision upholding the right of the Bureau of Municipal Research to examine certain records of the New York City Health Department. Access to these records was denied to Dr. William L. Allen some months ago. Dr. Allen then applied to the Supreme Court for a writ of mandamus, which was denied. An appeal from the Supreme Court order to the Appellate Division was also dismissed and Dr. Allen then took the matter to the Court of Appeals. A statement issued by the Bureau of Municipal Research, of which Dr. Allen is director, states that this decision makes it clear in the State of New York under existing laws, that a taxpayer may have access to all public records of the city with the exception of those of the police and law departments, and the health department, where the taxpayer must comply with the reasonable rules and regulations of the Board of Health governing access.

NORTH CAROLINA

New Laboratory to be Dedicated.—The trustees and the faculty of the University of North Carolina have issued invitations to the dedicatory exercises of the new medical laboratories in Caldwell Hall, May 8.

Personal.—Dr. Baird U. Brooks, West Durham, who was brought to the Union Protestant Infirmary suffering from kidney disease and was operated on March 12, is reported to be doing well.——Dr. Ralph B. Seem, for four years superintendent of the James Walker Memorial Hospital, Wilmington, has resigned and will locate in Wilmington after a course of postgraduate work.

State Board of Health Upheld.—The Supreme Court has finally decided the various issues involved in the appeal case from Wake County involving the right of the secretary of the State Board of Health to appoint a county superintendent of health and to fix his salary, providing the county authorities have failed to elect such an officer. In the case in question, Dr. J. J. L. McCullers, as has already been noted in THE JOURNAL, was appointed by the secretary of the State Board of Health, health officer of Wake County, as the county authorities had failed to make a choice. The secretary also fixed his compensation, but the Wake County commissioners resisted the payment of the bills of Dr. McCullers for professional work until the question had been decided by the courts; then they paid Dr. McCullers in accordance with the agreement made with the secretary of the State Board of Health.

PENNSYLVANIA

The Coatesville Typhoid Epidemic.—Up to April 3 there had been thirty-four deaths from typhoid at Coatesville, the total number of cases in the borough exceeding 300. The public schools, which had been closed for twenty days, opened March 25. Miss Katherine Gillespie, supervisor of state nurses, who had been in charge of the County Hospital, died from typhoid in the Presbyterian Hospital, Philadelphia.

Personal.—Dr. Mary A. McCay, Sunbury, is reported to be seriously ill with nephritis.——Dr. Edwin St. Clair Wren, Reading, is ill with appendicitis, at Reading Hospital.——Dr. and Mrs. Ferdinando Colletti, Reading, have returned after nearly a year abroad.——Dr. A. J. Ainey, Brooklyn, has retired after forty-five years of practice.——Dr. J. Ray Light, Lebanon, who has been ill for two months, is reported to be convalescent.——Dr. J. J. Robb, a member of the staff of the State Hospital for the Insane, North Warren, has resigned to take graduate work.——Dr. R. C. King, Hellerstown, is ill in St. Luke's Hospital, Allentown, with an infection of the hand, following an operation wound.

Plans of Medical Bureau.—The new State Bureau of Medical Education and Licensure, April 1, completed the agreement on reciprocity on medical practitioners' licenses to be offered to the other states. Reciprocity applies only to the holders of diplomas from medical colleges recognized as in good standing by the licensing authorities of the state in which the candidate seeks the right to practice; the licensing authorities of either state are to follow the laws of their state in rating preliminary education.——The bureau has also decided to put into effect this year a system of examining and licensing midwives. ——The bureau urges strict rules of standardization and states that students of medical colleges who fail in their final examinations must be compelled to repeat the senior year, and has decreed that hereafter it will admit to practice no student who has failed first, and finally passed a second examination several weeks later.

Philadelphia

Addition to Hospital.—Plans are being prepared for a three-story addition to the University Maternity, which will give a total capacity of more than one hundred and twenty beds, and thus placing the Maternity here on an equality with Sloan Maternity, New York, and the new Magee Maternity of Pittsburgh. Plans are also in preparation for a dispensary building to be added to the Maternity amphitheater.

Memorials to Drs. Kelly and Long.—Friends of the late Dr. Aloysius O. J. Kelly have presented $1,000 to the trustees of the University of Pennsylvania to create a prize in clinical medicine as a permanent memorial of Dr. Kelley's services to the university.——Besides the unveiling of the tablet to the memory of Dr. Crawford Williamson Long at the university on March 30, additional honor was done to his memory, April 1, when a portrait of Dr. Long, painted by his daughter, was unveiled with appropriate ceremonies in the medical school building.

Penny Lunches Beneficial.—The penny and three-cent lunches of the Home and School League have proved so beneficial to the children, not only to their health but to their mentality and deportment, that the Home and School League committee have opened branches in two schools, the Northwest Grammar, at Fifteenth and Race, where 800 children have been served in three weeks and the Miller School at Howard and Diamond. There are now eight public schools having the penny and three-cent lunches. Bowls of bean soup, piles of graham wafers, milk in big glasses, fruit, chocolate and cereal form the basis of the meal.

VIRGINIA

Stokes on Sanitation.—A reception was held at the Naval Hospital, Norfolk, April 2, at which Surgeon-General Charles F. Stokes delivered an address on "Sanitation in the Navy."

Personal.—Dr. C. Mason Smith has been elected president and Dr. J. N. Barney, Jr., secretary of the Fredericksburg Board of Health.——Dr. E. C. Fisher, Richmond, was attacked by a negro highwayman in Fulton, in an attempt at robbery, but fought off his assailant.

Health Association Formed.—A meeting was held in Norfolk, March 18, at which the Health Association of Hampton Roads was organized. The following officers were elected: president, Dr. Southgate Leigh, Norfolk; vice-president, Dr. Joseph T. Buxton, Newport News, and secretary, Dr. L. T. Royster, Norfolk.

WISCONSIN

The Public Health Degree.—By vote of the regents, on recommendation of the faculty, the degree of "Doctor of Public Health" has been established at the University of Wisconsin. Candidates for this degree must hold the degree of doctor of medicine from medical schools of approved standing, and must have spent at least two years subsequent to the regular medical course in the study of science relating to hygiene and public health.

GENERAL

Interstate Tuberculosis Congress.—Governor Colquitt of Texas has invited the governors of Arizona, California, Colorado, Kansas, Nevada, New Mexico, Oklahoma and Utah to join in and to appoint delegates to the conference on tuberculosis to be held in Waco, April 16-17, under the auspices of the Texas Antituberculosis Association.

Missouri Valley Meeting.—The annual meeting of the Medical Society of the Missouri Valley, March 21-23, at Colfax, while handicapped by storm, was a successful and interesting one. There were symposiums on diseases of the kidneys, migraine and tuberculosis. The next meeting, the twenty-fifth anniversary of the society, will be held in Council Bluffs, Iowa, September 5 and 6.

Pathologists and Bacteriologists Elect.—At the annual meeting of the American Association of Pathologists and Bacteriologists, held at the University of Pennsylvania, Philadelphia, April 5 and 6, the following officers were elected: president, Dr. Herbert U. Williams, Buffalo, N. Y.; vice-president, Dr. J. J. MacKenzie, Toronto, Ont.; secretary, Dr. H. C. Ernst, Boston; treasurer, Dr. F. B. Mallory, Boston, and councilors, Drs. W. H. Park, New York City; Leo Loeb, St. Louis and E. R. LeCount, Chicago.

Urologists Meet.—At the eleventh annual meeting of the American Urological Association, held in New York City, April 2 and 3, more than two hundred were present and the following officers were elected: president, Dr. Granville MacGowan, Los Angeles; vice-president, Dr. J. Bentley Squier, New York City; secretary, Dr. H. A. Fowler, Washington, D. C., and treasurer, Dr. H. G. Fuller, Washington, D. C. At the annual banquet Dr. Louis E. Schmidt, Chicago, the retiring president, served as toastmaster.

Naval Medical School Graduation.—The closing exercises of the United States Naval Medical School, Washington, were held March 25, when a class of seven was graduated. Diplomas were presented and the principal address was made by Surgeon-General Charles Francis Stokes. Dr. William Webber Ford, professor of hygiene and pathology in Johns Hopkins University, delivered an address on the "Advancement of Medicine as a Science," and closing remarks were made by Medical Director Henry Gustave Beyer, dean of the school.

A Call to Anesthetists.—The New York Society of Anesthetists asks the anesthetists in the United States and Canada to meet in Atlantic City, N. J., at the time of the session of the American Medical Association, June 4-7, to form a national organization. The preliminary meeting for organization will be held June 4, when officers will be elected and committees appointed. All anesthetists are urged to join their local county and state associations and thus become eligible for membership to the American Medical Association. The symposium on anesthesia will be held June 6 in the Section on Pathology and Physiology. The headquarters of the anesthetists will be at the Hotel Marlborough-Blenheim.

Conventions Elect Officers.—The fifth annual meeting of the American Association for Cancer Research was held at the University of Pennsylvania, Philadelphia, April 3 and 4. The following officers were elected: president, Dr. E. E. Tyzzer, director of the cancer research of Harvard University; vice-president, Dr. Leo Loeb, St. Louis; secretary, Dr. S. B. Wolbach, Harvard University.——The fifth annual meeting of the International Association of Medical Museums was held at the University of Pennsylvania, Philadelphia, April 4. The officers of the association are as follows: president, Dr. A. S. Warthin, University of Michigan, Ann Arbor; vice-presidents, Drs. G. Sims Woodhead, Cambridge, Eng., Edward Souchon, Tulane University, New Orleans, and J. Ludwig Aschoff, Freiburg, Germany; secretary and treasurer, Dr. Maud Abbott, Gill University, Montreal and assistant secretary, Dr. Joseph Kaufmann, McGill University.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, March 30, 1912.

The Suffrage Question from the Medical Point of View

The attempts of a certain portion of the female population to obtain the right to vote for representation in Parliament have been marked by repeated outbreaks of disorder and mobbing of ministers, interruption of speeches at public meetings, raids on the House of Commons and, finally, by the smashing of the windows of unoffending shopkeepers. The medical profession regards the agitation as a neurotic manifestation, such as is familiar in the consultation-room in women who have no occupation and have missed their vocation in life. Sir Almroth Wright has published in the *Times* a remarkable letter of three columns under the title "Militant Hysteria," in which he advances many reasons why women are both mentally and physically unfitted for the franchise. In the first place, menstruation and child-bearing are associated with hypersensitiveness, unreasonableness and loss of the sense of proportion. The recruiting field for the militant suffragists is the half million of our excess of female population. Sir Almroth divides into types the women in the militant movement: (1) Women who hold, with minds otherwise unwarped, that they may, whenever it is to their advantage, lawfully resort to physical violence. (2) Women who have all their lives been strangers to joy, whose instincts, long repressed, have broken out into flame. In them everything is turned into bitterness and hatred of men. Their legislative program is license for themselves or restrictions for men. (3) The incomplete. One side of their nature has undergone atrophy, with the result that they have lost touch with their fellow men and women. Their program is to convert the whole world into an epicene institution in which man and woman shall everywhere work side by side at the same tasks and for the same pay. (4) The woman who is poisoned by her misplaced self-esteem, and who flies out at every man who does not pay homage to her intellect. She is affronted when a man avers that for him the glory of woman lies in her capacity for motherhood and in answering allegiance to the ethics special to her sex. In the wake of these embittered women come

V. 58 1912

troops of girls just grown up. "All these will assure you," he says, "that woman has suffered all manner of indignity and injustice at the hands of man. To obey a man would be to commit the unpardonable sin." Discussing the resort to physical force by the suffragists he goes on, "Up to the present in the whole civilized world there has ruled a truce of God as between man and woman. That truce is based on the solemn covenant that within the frontiers of civilization the weapon of physical force may not be applied by man against woman or by woman against man. Under this covenant the reign of force which prevails in the world without comes to an end when man enters his household and that half of the human race which needs protection is raised above the waves of violence. It is this solemn covenant so faithfully kept by man which has been violated by the militant suffragist in the interest of her morbid, stupid, ugly and dishonest program."

The National Insurance Act

A meeting of representatives of the medical faculties of the English universities, the Royal College of Physicians, the Royal College of Surgeons and the Society of Apothecaries, that is, representatives of most of all the licensing bodies of the metropolis, England, has passed a resolution recognizing that there is remarkable unanimity of opinion within the medical profession as to the attitude which its members should adopt toward the national insurance act and generally approving of that attitude, while conscious that there is some difference of opinion as regards details. The conference has expressed its willingness to support the demand that these principles should be recognized by the government. In Ireland, the profession views the act with apprehension, as in England, but on different grounds, for the system of practice is quite different. There, in private practice, the traditional 85 fee prevails, but for poorer patients is mitigated by giving two or more attendances for the one fee. The physician writes a prescription which the patient gets compounded by a pharmacist at his own expense. In England, for the same class, fees running as low as 50 cents or even 25 cents are charged and medicine is supplied with the advice. On the other hand, in England all classes, except absolute paupers, pay fees to the physician or obtain attendance through benefit societies, while in Ireland, the working class, for which the fees in vogue are out of the question, obtains free medical attendance at the public dispensaries, which are established all over the country and maintained out of the rates. In deference to the wish of the Irish members of Parliament, Ireland has been excluded from the portion of the act which concerns medical benefits, as the class for which they are intended already obtains medical attendance free. Objection to this exclusion was at once raised by the Irish physicians, curiously at the very time their English colleagues were strenuously objecting to the medical portion of the act. The reason was probably that the Irish dispensary doctors, whose stipend is small, thought that they might fare better under the act, or perhaps had some idea that while still drawing their stipends they could also receive fees under the act. Now they are beginning to see that if the medical benefits are introduced into Ireland a grave revolution in medical practice must occur. Benefit societies do not flourish in Ireland as they do in England, but it seems likely that the act will lead to their development, and politicians are urging the people to join or form benefit societies to be administered under the act and so eventually obtain medical attendance. It is becoming evident to the Irish physicians that if this is done on a large scale and medical benefits are extended to Ireland, which they will be as soon as there is a popular demand for them, a reduction must take place in the number and salaries of dispensary physicians. Physicians will not be required as such, except for actually destitute persons. In one direction, those who have paid moderate fees, and, in the other, those who were dispensary patients will be swept into the insurance net. In order that the new system may not bring ruin on the profession thorough organization is considered necessary. This is now proceeding and a conjoint committee of the British Medical Association and the Irish Medical Association has been appointed for the purpose.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, March 22, 1912.

Treatment of Syphilis in Pregnant Women

On March 19, Dr. Pamard of Avignon read before the Académie de médecine a paper which elicited a very interesting discussion. He reported four cases in which women married to syphilitics gave birth to syphilitic children without ever having presented a single syphilitic symptom themselves. After mercurial treatment of the fathers, these women, again becoming pregnant, had children that were as healthy and vigorous as the children of sound parents. Dr. Pamard believes that in such cases the uterine mucosa alone is infected. Never having had any failure with mercurial treatment of pregnant women or new-born infants, he believes that there is no reason to employ another drug, such as salvarsan.

Dr. Pinard, professor of clinical obstetrics at the Faculté de médecine de Paris, remarked that it could not be too often repeated that congenital syphilis was by far most frequently of paternal origin. Dr. Pinard insisted on the necessity of treatment of the fathers before conception and of the mothers during gestation. As for the syphilis contracted by the mother from the fetus, as believed by many authors, Pinard declared that he had never observed a single piece of evidence in support of it. He had lately seen a woman who had two normal pregnancies by one man, then by a second man two pregnancies each terminated by the expulsion of the dead syphilitic fetus; then without any intervening treatment, she had by a third man two pregnancies terminated by the birth of living and healthy children. Such a fact can be explained only by admitting that the maternal organism remained immune to all syphilitic contamination.

Dr. Balzer, physician at the Saint-Louis hospital, believes that all women who bear syphilitic children ought to be considered as infected with syphilis, even if they do not present any symptoms, it being possible that such symptoms may not manifest themselves until several months or years after the pregnancy.

Dr. Bar, professor of clinical obstetrics at the Faculté de médecine de Paris, believes that women who bear syphilitic children by syphilitic fathers may themselves present specific symptoms without a chancre ever having been discernible in them. But on the other hand, there are cases in which a woman who has given birth to a syphilitic child shows no trace of syphilis. In such a case, the Wassermann test is found clearly positive in the fetus, but feebly so in the mother, and this question of the degree is one of the first importance. After the observation of the positive reaction, Colles' law was denied in Germany. Bar, taking into account the degree of the reaction, asks if a febrile positive reaction is not the result of a passive immunity of the mother. What seems to favor this view is that some weeks after childbirth, the reaction tends to become negative, even in the absence of all treatment.

The Neomalthusian Propaganda and the Falling Birth-Rate.

At the second Congrès de la Fédération des Sociétés contre la pornographie, M. Bureau, professor of the Institut catholique, read an interesting paper on neomalthusianism and its relation to depopulation. The doctrine of Malthus is today completely changed.

Malthus, fearing that the means of subsistence might not increase in the same proportion as the population, recommended abstinence and chastity to avoid that increase of the human race which, he believed, led to misery. Those who proclaim themselves to-day disciples of Malthus are far from adhering to that ascetic doctrine. There seems to be a direct relation between their propaganda and the diminution of the birthrate. M. Bureau especially cited the examples of three cities where the neomalthusian movement has ardent disciples: Roubaix, Tourcoing and le Creusot. At Roubaix, there were in 1897, 3,837 births; in 1906, 2,568. At Tourcoing, there were in 1898, 2,445 against 1,675 in 1906. At le Creusot, there were in 1893, 855 births for 28,229 inhabitants; in 1904 there were 592 for 30,000 inhabitants.

Unfortunately, owing to a defect in the law, so that only obscenity of the text is punishable in advertisements, it is very difficult to make headway against this propaganda. The courts in three cases have declared that it was impossible to convict those who dealt in objects for such purposes, much as the given action was to be reprobated.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, March 22, 1912.

Personal

Professor Posner, the publisher of the *Berliner klinische Wochenschrift*, has received the title of medical privy councillor (Geheimer Medizinalrat).

At the close of the winter semester Professor Schottel, director of the hygienic institute at Freiburg, will retire. As

his successor Professor Hahn, director of the hygienic institute at Königsberg, is proposed.

Professor Dürck, former director of the pathologic institute at Jena, now prosector at the municipal hospital at Munich, will go to Brazil for six months at the invitation of the Brazilian government to organize the instruction in pathology and the management of institutes for pathologic anatomy.

Professor Dönitz, a department superintendent of the institute for infectious diseases, died March 13, aged 73. In the year 1872 he went to Japan, where he introduced European medicine into the medical academy of Tokio and into various Japanese hospitals and at the same time was an adviser of the government in the regulation of state medical affairs. When he returned to Germany, he became a fellow worker with Robert Koch, first in the hygienic institute and then in the institute for infectious diseases. In 1896 he became a member of the newly founded institute for the investigation of serums and serotherapy, under the direction of Ehrlich, as a result of which he later settled in Frankfort with the institute. When Professor Brieger resigned the directorship of the clinical department in the institute for infectious diseases, Dönitz was called to this place by the Ministerialdirektor Althoff, with whom he was very friendly, because as was claimed at the time, Althoff had great confidence in the medical skill of Dönitz and wished to be treated by him. A few years ago Dönitz resigned this place in order to devote himself to essentially scientific laboratory work. While in Japan he published a series of anthropologic articles, but his principal work was in the field of bacteriology, especially on the action of tuberculin, tetanus antitoxin and diphtheria antitoxin. Other studies were on the treatment of leprosy and on insects transmitting malaria and sleeping sickness, in which Dönitz' extensive knowledge of insects stood him in good stead.

At the end of the winter semester Professor Stieda, director of the anatomic institute at Königsberg, will retire from his position.

In addition to Professor Schütze still another medical member of the expedition of the German Red Cross to the Turkish camp in Tripoli, a recent medical graduate, has succumbed to typhoid.

Dr. Löhlein, surgeon at the Lazarus hospital, died March 11, in Berlin, at the age of 56.

Another Paratyphoid Epidemic in Soldiers

According to the law of duplication of cases, the wholesale poisoning at Potsdam has been followed by an epidemic of intestinal catarrh in an infantry regiment stationed in Mainz. Altogether about 80 soldiers were taken sick in about twenty-four hours. The Gärtner bacillus was found to be the cause of the illness.

Proposed Establishment of a University at Frankfort

As I mentioned some time ago, a number of influential citizens of Frankfurt a. M., under the leadership of the mayor, desire to found a university in that city. The intent is to make the university organization distinct from that of the other Prussian universities to the extent that the city of Frankfort shall bear the cost of the maintenance of the university and in turn shall mainly control the management and selection of the professors. At a discussion held a few days ago in the Prussian parliament, the minister of education made a statement in connection with this question which dampened the hopes of the Frankfort people to a considerable extent. He stated that investigations of the conditions at Frankfort by the officials of the department had led to the result that the material prerequisites for the founding of the university had been provided, but that the government must insist on the following points before the institution is established, namely, that the university must be completely independent of any sort of influence of the founders. It must have the same origin as any other university, that is, by letters patent from the king, the statutes to be approved by the king and the faculty by the minister. The professors must be called according to the same procedures as the professors of other universities. The minister must not be limited to the nominations made by the faculty; he may make to the king other nominations. In their other official relations the professors must be governed in the same way as in other universities. The external organization must be the same as elsewhere. The distinction from other universities consists only in the fact that the support is not derived from the state but from the Frankfort community and the other founders. It is in no way to be regarded as a special property of the city of Frankfort but a number of corporations must unite, among them the city of Frankfort, and must provide those institutions and means which are necessary to establish and maintain the university. As a distinction from other universities, a certain organization for the supervision of the external properties of the university shall be established. A commission is proposed that shall conduct the general management and a board (*Grosser Rat*) which shall to a certain extent act as a representative assembly for the determination of the budget, etc. This would act as an authority for regulation of the external affairs of the university. The newspaper statement that the university was already founded the minister characterized as not authentic. In the debate, all political parties, with the exception of the radical party, expressed themselves as opposed to the foundation of the university. With reference to this condition of affairs the *Deutsche medizinische Wochenschrift* remarks that, this being the case, one may well consider it doubtful whether a Frankfort university will be established. After the statement of the minister not much remains of the dreams of the Frankforters, and we need not suppose that the practical citizens of Frankfort will content themselves with the solitary privilege of paying the bills. On the other hand, one may believe that it was in fact the purpose of the Frankforters to establish "a" university *coute que coute* but not necessarily a high-grade, leading educational institution.

VIENNA LETTER

(*From Our Regular Correspondent*)

VIENNA, March 23, 1912.

Regulations of the Sale of Poisons and Firearms

The increasing number of accidents caused by the ease with which poisons and firearms (especially air-guns, fowling-pieces and revolvers) can be procured here has often been criticized, hitherto without any effect. But now a petition has been sent to the Ministry of Home Affairs asking for strict regulations in dealing with these conditions. There are certain poisons, like caustic potash in solution, phenol (carbolic acid), mercury bichlorid, as well as potassium cyanate and prussic acid, which are much used in commercial and industrial life, and which can be bought without any restriction whatever. Guns and pistols may be obtained by any boy, together with the projectiles belonging to the weapon. Therefore, teachers, magistrates, physicians and lawyers have combined to bring about a change in the existing state of affairs, in spite of the violent protests by the makers of firearms.

The Conflict Between the Profession and the "First Aid"

As has been told in a previous letter (February 10) the conflict between the profession and the Rettungsgesellschaft or "first aid" corps of Vienna, had assumed an unpleasant degree, as personal differences had been dragged into the discussion. Finally, the judgment of an ordinary court had been invoked, and Vienna would have had the painful occurrence of a body of physicians fighting against a medical institution which it tried to benefit. Peace was made, however, just when it was least expected. The "first aid" consented to recognize the Organization of the Practitioners as the legitimate representative body of its medical staff's wishes to work out a scale of fees and a house order for its physicians, in cooperation with this body; to regard the work done by its staff as fully equivalent to that done in hospitals; in short, all the desiderata and complaints of the physicians were complied with.

Miscellany

Effects of Altitude.—In their report to the Royal Society of a series of observations made on the summit of Pike's Peak during the summer of 1911 (*Nature*), Drs. J. S. Haldane, C. Gordon Douglas, Y. Henderson and E. C. Schneider draw the following conclusions, slightly abbreviated from the original. The symptoms first observed—cyanosis, nausea, bowel disturbance, headache, fainting in some persons, periodic breathing and great hyperpnea on exertion—are referable, directly or indirectly, to partial want of oxygen from diminished pressure of oxygen in the air. After two or three days on the summit very distinct signs of acclimatization begin to appear. After acclimatization has occurred, these symptoms disappeared, except hyperpnea on muscular exertion or after holding the breath. Periodic breathing was observed

V. 58
1912

occasionally, also blueness of the lips and face after severe exertion. The respiratory exchange during rest remained about normal in the one subject on whom exact experiments were made and did not seem materially increased during work. After acclimatization the alveolar carbon dioxid pressure ran down from about 40 mm. to 27 mm. during rest or moderate exertion, which corresponded to an increase of about 50 per cent. in the ventilation of the lung alveoli. During severe exertion the CO_2 pressure was about half what it normally is during similar exertion which corresponded to about 100 per cent. increase of the hyperpnea; and owing to a temporary alteration in the respiratory quotient the breathing was still further increased, for a time, to three times what it would have been at sea level with the same oxygen consumption. This change in the alveolar carbon dioxid pressure occurred gradually on going up and disappeared in the same way on going down, taking a number of days to reach completion. The hemoglobin percentage increased for several weeks on the summit and there was parallel increase in the number of red corpuscles. A large increase in the hemoglobin occurred during the first three weeks on the summit and with this, except during the first week, there was a slight increase in blood volume. On coming down the hemoglobin percentage diminished much more rapidly than the total hemoglobin. So far as observed, no marked change in rate of the circulation occurred though they mention a slight increase in the pulse-rate in most cases. After acclimatization the oxygen pressure in the arterial blood (measured by the carbon monoxid method) rose during rest by about 5 mm. of mercury, or 66 per cent. above the alveolar oxygen pressure, and remained at a level of only about 12 mm. below the normal oxygen pressure at sea level. Before acclimatization had occurred the arterial oxygen pressure was about 45 mm. below normal and only slightly above the alveolar oxygen pressure. This change appears to be due to a progressive increase in the activity of the alveolar epithelium in secreting oxygen inward. Acclimatization to altitude is mainly due to this increased activity, but partly also to the increased lung ventilation and to a less extent to the increased hemoglobin percentage in the blood. All these changes require some days for their development and this accounts for the difference in the effects of altitude on balloonists or travelers on mountain railroads who make rapid ascents and mountain-climbers who ascend more gradually.

Practical Eugenics—Medical Marriage Certificates

New Zealand has led the van in a number of social experiments, and a New Zealand writer, A. N. Field, has an article in the *Eugenics Review*, 1912, iii, 306 (quoted in the *Training School*), advocating legislation to compel a medical examination before marrying.

The chief danger of eugenics, says Field, is that when the biologic theories on which it rests have become popularized, there are certain to be a large number of energetic overanguine people who will proceed to experiment vigorously before scientific knowledge is really ripe for application. The main thing to be done at present is to bring people to think about eugenics, and to collect data in order that a more exact knowledge of the laws of heredity may be obtained. Human beings are not to be bred like farm stock.

As matters stand to-day, it is not possible to obtain accurate data as to human heredity, except in a comparatively small number of cases, and it seems that if the trouble were taken to educate public opinion up to the point, it would be quite feasible to obtain a most valuable contribution to the study of eugenics at a comparatively trifling cost.

Briefly, the idea is that every person before marrying should be compelled by law to undergo a private and confidential medical examination. The public has been accustomed for many years past to submit without complaint to examination by doctors when taking out life-insurance policies, and the examinations now proposed would not be one whit more irksome. The law might, however, provide that where one party to a proposed marriage refused to show this official medical certificate to the other party, no action for breach of promise would lie. The result of such an examination would be that no person could contract a marriage without having attention directed to his or her physical fitness to do so.

Of course, when two people, presumably more or less in love, get to the stage of applying for a marriage license, no doctor's views as to their physique are likely to have much weight with them. Still the mere fact that there is a medical examination to be undergone before a marriage can take place will cause the whole population to think much more seriously about this important question than it has done in the past. A direct national premium, as it were, is placed on good health. People assess most factors in a marriage, and here would be a new one in which not only the parties themselves, but also their relatives, would show a keen interest.

From the national point of view the result would be that a return could be issued every year along with the other vital statistics showing the number of "a's" marrying "a's," the number of "a's" marrying "b's," the number of "c's" marrying "d's," and so on through the list. The country would be able to see at a glance how things were tending, and in case of the "d's," more specific information might be published in another table, showing the grounds on which they were so classified. The marriage of "d's" with "d's" would give a clue as to what extent the production of degenerates was going on, and the course of the statistics would soon indicate whether further legislation was desirable. While the whole examination would be private and confidential, a duplicate of the certificate concerning each person would be filed away in the government archives, just as the private and confidential income-tax returns of the community are already filed in government offices. [It should be remembered that this plan is proposed for New Zealand.] From these records properly accredited officials would, in time, be able to secure definite information as to the ancestry of the great majority of the inmates of mental hospitals and defectives generally. In the course of a hundred years, which, after all, is a short time in the life of a community, an enormous mass of data would be available, and invaluable light would doubtless have been shed on many obscure problems of heredity.

Of course, when one talks in a general way of health certificates before marriage, people immediately jump to the conclusion that the idea is to divide society into two classes, the fit and the unfit, and to permit only the fit to marry. No one is at present competent to say who is fit to marry and who is not. It is doubtful whether it will ever be humanly possible to draw a hard-and-fast line. It is easy to pick out extreme cases—the thoroughly sound and clean-bred youth, and the lunatic descended of lunatics—but between these lies a great mass of population, neither especially fit nor especially unfit. Who is there that would dare to say just where the line was to be drawn?

Such an examination is worth striving for as an end in itself. It would make people think for themselves on this most important matter. It would offer a direct incentive to good health, particularly if the highest-grade certificates were refused to persons who, though free from disease, were not physically well developed. It would enable the state medical service to watch over the children of degenerate parents, and see that they were given the best chance possible. And, finally, it should tend to discourage experimenting before scientific knowledge is ripe for application.

Marriages

T. EDWARD MOORE, M.D., Berkeley, Cal., to Miss Virginia Potter of San Francisco, March 29.

J. MORTON BLISSARD, M.D., La Jara, Colo., to Miss Grace Rauch of Alamosa, Colo., March 15.

CASRIEL J. FISHMAN, M.D., Oklahoma City, to Miss Miriam Goldberg of Chicago, March 31.

ROBERT EUSTIS HOYT, M.D., U. S. Navy, to Miss Lucille Cook of Oakland, Cal., April 10.

Deaths

John Herr Musser, M.D. President of the American Medical Association in 1903-4, eminent as an internist, died at his home in Philadelphia, April 3, from angina pectoris, aged 55.

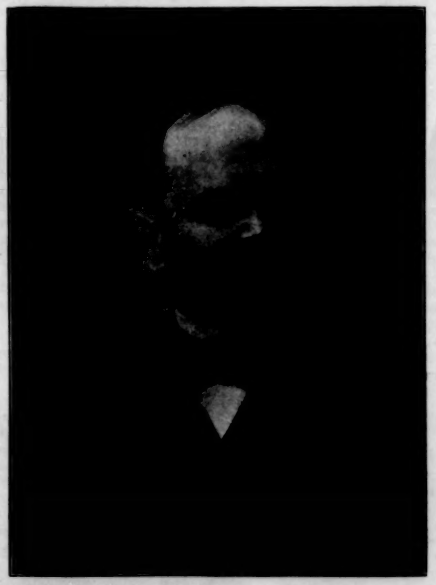
He was born in Strasburg, Pa., June 22, 1856, the son of Dr. Benjamin and Naomi Herr Musser. He came of a line of physicians, his grandfather being Dr. Martin Musser and his great grandfather, Dr. Benjamin Musser.

His early education was received at the Strasburg (Pa.) High School and the Millersville State Normal School. He took his medical course in the University of Pennsylvania, graduating in 1877. He immediately commenced practice in Philadelphia and soon built up an enormous practice. After a few years he associated himself with his uncle, Dr. Milton B. Musser, in West Philadelphia, and on his death succeeded to his extensive practice.

The first fifteen years of Dr. Musser's professional life were spent in general practice, including his internship in the Philadelphia Hospital. After this he devoted his time more and more to internal medicine as a specialty, and to consultation work.

Dr. Musser was one of the group of able young men whom Dr. William Pepper gathered around him in the University—a group notable for ability, means and social standing; a group which Professor Pepper brought up in his own line of teaching, making them consummate diagnosticians and clinicians of unusual ability.

Dr. Musser early began his teaching work in his alma mater; first as a quiz-master, later as demonstrator and associate professor, and finally as professor of clinical medicine. He was also director of the Department of Research Medicine in the University. He held many positions in connection with hospitals, among them those of pathologist of the Presbyterian Hospital; physician to the Philadelphia, University, and Presbyterian hospitals; consulting physician to the Jewish Hospital, West Philadelphia Hospital for Women, Germantown, Chestnut Hill and Rush hospitals, Philadelphia, and Mercy Hospital, Springfield, Mass. In his hospital work, Dr. Musser's studies were chiefly along the lines of morbid anatomy and diagnosis.



John Herr Musser, 1856-1912

He had been president of the following societies: American Medical Association, 1903-4; American School Hygiene Association, 1909; Philadelphia Pathological Society, 1893-1897; Philadelphia County Medical Society, 1899, and of the National Medical Library Association at the time of his death. He was vice-president of the Pennsylvania Society for the Prevention of Tuberculosis in 1910 and was also an active, corresponding, or honorary member of many other learned societies in this country and abroad. He was given the honorary degree of LL.D. by Franklin and Marshall College in 1908 and was commissioned First Lieutenant, Medical Reserve Corps, U. S. Army.

In addition to his contributions to current medical literature, Dr. Musser was the author of a work on medical diagnosis, which has gone through six editions; was editor of the volume on diseases of the lungs in Nothnagel's Encyclopedia and co-editor with the late Dr. Aloysius O. J. Kelly of a system of therapeutics. He also was the author of the article on pneumonia in Osler's System of Medicine and of various articles in Hare's system of therapeutics.

Dr. Musser was actively engaged in the formation of the Committee of One Hundred of Philadelphia to inspect the public charities of the city, and was also chairman of the committee to present to the mayor the plans and methods of action of the new Vice Commission, which is about to be appointed. He was a pioneer in social service work in the Hospital of the University of Pennsylvania, and president of the organization formed for that purpose. He also started tuberculosis classes in the Presbyterian Hospital.

In the death of Dr. Musser in the prime of life and at the zenith of his professional career, the medical world has lost an internist and diagnostician of the highest grade; medical education, an enthusiastic, earnest and painstaking instructor; medical literature, a writer of no mean degree; science, a brilliant laborer in its research field, and social service, a pioneer.

Henry O. Walker, M.D., a pioneer surgeon of Michigan and a man well-known and beloved throughout the Middle West, died at his home in Detroit, April 5, from pneumonia, aged 68. Dr. Walker was a native of Detroit, studied in Albion College and the University of Michigan and took his medical course in Bellevue Hospital Medical College, graduating in 1867. He commenced practice in his native city and after two years became secretary of the Detroit College of Medicine, a position which he held until his death. He was also professor of surgery in the institution. He was a member of the American Medical Association, third vice-president in 1888-9, first vice-president in 1892-3; chairman of the Section on Surgery in 1899; secretary in 1883 and a member of the House of Delegates from the section in 1904. He was a charter member and once president of the Mississippi Valley Medical Association. He had also served as city physician of Detroit and physician of Wayne County and as a member of the Board of Estimates and Board of Health of Detroit. He was commissioned First Lieutenant, Medical Reserve Corps, U. S. A., in 1908, and was a member of the Association of Military Surgeons of the United States. He had been surgeon to Harper's, St. Mary's and St. Luke's hospitals, Detroit, and the Eastern Michigan Asylum. His contributions to the medical literature were chiefly on genito-urinary surgery. In 1869 he became editor of the *Detroit Review of Medicine*.

Russell Broughton, M.D. Rush Medical College, 1869; a member of the American Medical Association; a veteran of the Civil War; proprietor and manager of the Broughton Sanitarium, Rockford, Ill., who had made the treatment of alcohol and drug addictions a special study for many years and had been remarkably successful in this line of work; esteemed and beloved as a practitioner and friend by his professional brethren and patients; died at his home in Rockford, April 4, from pneumonia, aged 69.

George Washington Scollay, M.D. Missouri Medical College, St. Louis, 1840; who had not practiced since 1851, but had devoted his time to chemistry, with especial reference to glass-making; a pioneer glass manufacturer of St. Louis; died at the home of his daughter in St. Louis, March 4, from arteriosclerosis, aged 92.

Alfred Buckingham, M.D. Miami Medical College, Cincinnati, 1856; in charge of the Camp Dennison hospitals during the Civil War; died at his home in Camp Dennison, Ohio, March 23, aged 79.

V. 58
1912

George Washington Maser, M.D. Bellevue Hospital Medical College, 1881; a member of the American Medical Association and a charter member and formerly president of the Labette County (Kan.) Medical Society; a specialist on diseases of the eye and ear of Parsons, Kan., and consulting oculist to the Missouri, Kansas & Texas Railroad; died at his home in Parsons, March 26, from an infection of the gall-bladder with perforation, aged 56.

Darius Mason, M.D. College of Physicians and Surgeons, New York City, 1853; a member of the American Medical Association; formerly president of the Washington State Medical Association and a member of the judicial council of the American Medical Association; who was the guest of honor at the annual meeting and banquet of the Spokane Medical Society in 1910; died at his home in Spokane, March 26, from heart disease, aged 82.

Julius Lincoln Salinger, M.D. Jefferson Medical College, 1886; a member of the American Medical Association; a neurologist and medical expert of Philadelphia; at one time assistant professor of the practice of medicine in his alma mater and a member of the staff of the Philadelphia Hospital; while testifying in the court of common pleas, March 24, became unconscious and died from angina pectoris, aged 46.

Gideon E. Blackburn, M.D. Pulte Medical College, Cincinnati, 1879; a veteran of the Civil War; superintendent of, and surgeon to, the Blackburn Hospital, Butte, Mont.; a member of the legislature and chairman of the house committee on appropriations; died suddenly in Butte, March 24, from nephritis, aged 72. The Silver Bow Medical Society at a special meeting, adopted resolutions of regret.

Thomas Nicol McLean, M.D. McGill University, Montreal, 1882; a member of the American Medical Association, and formerly president of the Park Region District and Ottertail County medical societies; local surgeon at Fergus Falls, Minn., for the Great Northern Railway; mayor of Fergus Falls from 1894 to 1895; died in Chicago, March 22, from carcinoma of the kidneys, aged 52.

John Little Morris, M.D. Rush Medical College, 1893; formerly a member of the American Medical Association, consulting physician to Cook County Hospital and chief surgeon to the Union Elevated Railway, Chicago; since 1902 manager and chief of staff of the Columbus (Ind.) Sanitarium; died in the Southeastern Hospital for the Insane, Madison, Ind., March 23, aged 42.

William Craig, M.D. Philadelphia University of Medicine and Surgery, 185—; assistant surgeon of the Twenty-Sixth Pennsylvania Volunteer Infantry during the Civil War and later a practitioner of Chicago; for several years an inmate of the Home for Disabled Volunteer Soldiers, Danville, Ill.; died in that institution, March 8, from chronic interstitial nephritis, aged 80.

William Bushy Dewees, M.D. University of Pennsylvania, Philadelphia, 1877; formerly of Newark, N. J.; a member of the American Medical Association; formerly president of the Golden Belt Medical Society of Kansas, and surgeon-in-chief of the Dewees Sanitarium, Salina, Kan., died in a hospital in Morris Plains, N. J., March 27, aged 57.

Morris Stanley Guth, M.D. University of Pennsylvania, Philadelphia, 1876; a member of the American Medical Association; for twenty-five years assistant physician and later superintendent of the State Hospital for the Insane, Warren, Pa.; died suddenly in Erie, Pa., March 27, from heart disease, aged 60.

Everett W. Fish, M.D. Homeopathic Medical College of St. Louis, 1868; of Pittsford, N. Y.; a large part of whose life was spent in newspaper work; for a time a member of the faculty of Pulte Medical College, Cincinnati; died in the railway station at Pittsford, N. Y., March 24, from heart disease, aged 66.

George Rea, M.D. Memphis Hospital Medical College, 1908; formerly resident physician at the Nordrach Ranch Sanatorium, Colorado Springs; since September, 1911, surgeon for the Uintah Railroad, with headquarters at Dragon, Utah; died suddenly in that place, March 2, aged 30.

Annie M. Tremaine, M.D. Woman's Medical College of the New York Infirmary for Women and Children, 1899; head woman physician to the Craig Colony for Epileptics, Sonyea, N. Y., for several years; died in the Willard State Hospital for the Insane, March 25, aged 45.

Adolph C. Heltzendorff, M.D. Fort Wayne (Ind.) College of Medicine, 1879; a member of the American Medical Association; was found dead at his home in Plymouth, Ind., February 18, from valvular heart disease, aged 72.

William Edward Holbrook, M.D. Harvard Medical School, 1879; a member of the Massachusetts Medical Society and of the staff of the Lynn (Mass.) Hospital; for several years city physician of Lynn; died at his home in that city, March 23, from acute gastritis, aged 57.

Frederick Robie, M.D. Jefferson Medical College, 1844; Governor of Maine from 1882 to 1886 inclusive; a veteran of the Civil War, in which he served as lieutenant-colonel, U. S. V., died at his home in Gorham, February 2, from arteriosclerosis, aged 89.

Stansbury W. Lemmon, M.D. Western Reserve University, Cleveland, Ohio, 1855; a member of the Indiana State Medical Association, and said to have been the oldest practitioner of Noble County; died at his home in Albion, March 20, from diabetes, aged 82.

Frank William Rulien, M.D. University of Minnesota, Minneapolis, 1897; a member of the American Medical Association and a practitioner of Joliet, Ill., since 1903; died in the Presbyterian Hospital, Chicago, March 29, from organic heart disease, aged 40.

Walter Taylor, M.D. University of Toronto, 1898; L.R.C.P. London, M.R.C.S. England, 1908; F.R.C.S. Edinburgh, 1909; a member of the St. Catharines (Ont.) Medical Society; died at his home in St. Catharines, February 13, from pneumonia, aged 41.

Howard C. Spencer, M.D. Eclectic Medical Institute, Cincinnati, 1893; a member of the Florida Medical Association; of Gainesville; was shot and killed while making a professional call five miles from Gainesville, February 26, aged 49.

William H. Barcroft, M.D. Starling Medical College, Columbus, Ohio, 1875; of Coshocton, Ohio; who started to make a professional call south of the city, March 17, was found frozen to death in a field 5 miles from Coshocton, March 23, aged 59.

Joshua Washington Seiberling, M.D. Bellevue Hospital Medical College, 1873; a well-known practitioner of the Lehigh Valley; died suddenly near his home in Hynemansville, Pa., March 23, from cerebral hemorrhage, aged 64.

Gustave Demars (license, Minnesota, Act of 1887); a practitioner for fifty-five years; died at his home in Hallock, March 28, as the result of injuries received the day before, when he was struck by a passenger train, aged 76.

John Henry Bradley, M.D. Louisville (Ky.) Medical College, 1897; formerly of Bradley, Ga., and a member of the Dublin (Ga.) Board of Health; died at his home in Blue Ridge, Ga., March 26, from tuberculosis, aged 36.

Samuel Thomas Keith (license, years of practice, Ohio, 1896); a practitioner for forty-one years, and a veteran of the Civil War; died at his home in Canton, Ohio, March 28, from cerebral hemorrhage, aged 67.

Barclay Rathif, M.D. Medical College of Indiana, Indianapolis, 1881; a member of the Indiana State Medical Association; school inspector of Decatur township; died at his home in West Newton, March 22, aged 57.

Wilson H. Swales, Jr., M.D. Medical College of Ohio, Cincinnati, 1878; of Logan, Ind.; formerly coroner of Dearborn County, was thrown from his buggy in a runaway accident, March 24 and instantly killed.

James Chalmers Cameron, M.D. McGill University, Montreal, 1874; professor of obstetrics and diseases of infants in his alma mater; died recently and was buried from his residence in Montreal, March 19.

Frank Cogswell, M.D. Northwestern University Medical School, Chicago, 1876; formerly of Lincoln, Kan., Oaksdale, Wash., and Madison, Wis.; died at his home in Seattle, March 22, aged 65.

Osker F. Taylor (license, years of practice, Illinois, 1878); a member of the American Medical Association; died at his home in Granville, January 27, from arteriosclerosis, aged 74.

Joseph Robert Cravens (license, Indiana, years of practice); a veteran of the Civil War; for many years a practitioner of Franklin; died at his home in Anderson, from uremia, aged 80.

Philip Henry Bartells, M.D. an eclectic practitioner of Roxbury and Durham, Kan., for more than forty years, died in Lawton, Okla., February 2, from senile debility, aged 71.

William Gaston Raines (license, Tennessee, 1889); one of the oldest practitioners of Decatur County; died at his home in Parsons, March 22, from pneumonia, aged 74.

Edgar H. Stoll, M.D. Hahnemann Medical College, Chicago, 1900; of Gilt Edge, Mont.; died in that place, March 23, a few days after a surgical operation, aged 35.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

MISCELLANEOUS FRAUDS

Three Prescription Fakes and their Analyses

FLOWERS OF OXZOIN

Harriet Meta of Syracuse, N. Y., advertises extensively her "marvelous discovery for removing wrinkles." In the New York *World* almanac, 1912, we read that "arrangements have been made with Mlle. Meta to furnish free information" to all its readers regarding this wonderful wrinkle eradicator. Those who write to Harriet Meta receive a form letter from the To-Kalon Manufacturing Co., who claim to be the proprietors of the Harriet Meta system. The letter, which is signed Harriet Meta, says that the recipient is being sent "absolutely free my $3 formula for making my wonderful skin and complexion beautifiers known as 'Milk of Roses.'" The "formula" is of the "prescription fake" type and calls for rose water, tincture of benzoin and "flowers of oxzoin." The flowers of oxzoin is the joker; that is to say it is a "patent medicine" sold by the To-Kalon concern. Flowers of oxzoin have been analyzed by the state chemists of Kansas and North Dakota. The latter state publishes the following result of its analysis:

Zinc oxid	15.6%
Glycerin	16.7%
Rose water	67.7%

This combination is said not only to remove wrinkles but also to remove "pimples, blotches, blackheads, sunburn and tan." It is also said to be "unsurpassed for the treatment of eczema and other skin diseases." It is hardly necessary to say that the stuff is sold under fraudulent claims and by disreputable methods.

SAXOLITE

Saxolite is another "wrinkle eradicator" sold under the prescription fake method. It is said to be manufactured by the Dearborn Manufacturing Company, Chicago. Advertisements, published to simulate reading matter, recommend the purchase of one-half pint of witch hazel and one pound of powdered Saxolite. These are to be mixed and, if we are to believe the exploiters—which we are not—will not only eradicate wrinkles but will remove double chin and baggy cheeks. Saxolite was analyzed by the state chemists of Kansas, who report that it has the following composition:

Alum	52%
Epsom salts	48%

The actual effect of this mixture is to cause a temporary "tightening" of the skin that will be followed by a more pronounced "bagginess." This makes the nostrum a good "repeater," an element that is essential to the continued sale of fraudulent preparations of this kind.

VILANE POWDER

Vilane Powder is sold as a "concentrated powerful antiseptic germicide and disinfectant" by the Blackburn Products Co. of Dayton, Ohio. This concern sells a number of nostrums under fraudulent claims and by dishonest methods. One of its methods of advertising is to publish, in such newspapers as will accept it, a fake answer-to-correspondents department entitled "The Doctor's Answers on Health and Beauty Questions. By Dr. Lewis Baker." Each of these answers contains recommendations for certain combinations of drugs, each combination containing as one of its ingredients a "patent medicine" put out by the Blackburn Products Co. Vilane powder is recommended for "catarrh, hay fever, leukorrhea, hemorrhages, tonsillitis and sore throat." It was analyzed by the North Dakota chemists who reported it to be essentially a mixture of washing soda, cooking soda, common salt, sodium salicylate and a little thymol; or, to tabulate:

Common salt	42.4%
Sodium carbonate	14.1%
Sodium bicarbonate	21.0%
Sodium salicylate	4.6%
Thymol	0.1%

The North Dakota laboratories tested this mixture for its germicidal power and found that it did not possess any germ-killing action whatever. To quote: "As a germicide, this preparation is valueless and the claims made are absolutely false and misleading. It has very slight antiseptic properties due to the small amount of salicylic acid it contains."

ADVERTISING TO THE PUBLIC OF ANTISEPTICS, GERMICIDES AND DISINFECTANTS

Report of the Council on Pharmacy and Chemistry

With the view of encouraging the use of reliable and efficient antiseptics, germicides and disinfectants by the public, so far as is compatible with safety, the Council appointed a committee to formulate conditions under which the advertising to the public of such preparations accepted for inclusion with New and Nonofficial Remedies should be permitted.

The Council adopted a report which authorizes the advertising of antiseptic and germicidal preparations to the public provided that the advertising is limited to recommendations for use as a prophylactic application to superficial cuts and abrasions of the skin and to the mucous surfaces except those of the eye and the gastro-intestinal and genito-urinary tracts. The report follows.

W. A. PUCKNER, Secretary.

V. 58
1912

Report of the Committee on Advertising of Antiseptics, Germicides and Disinfectants to the Public

Antiseptics, germicides and disinfectants are freely used by the public and as the result has proved, on the whole, to be beneficial, no restriction of this use has hitherto seemed advisable, contrary to that advocated for remedies taken internally. This principle has been recognized by the Council on Pharmacy and Chemistry in Rule 3:

"No article that is advertised to the public will be admitted, but this rule will not apply to disinfectants advertised for uses other than on the human body or to non-medicinal food preparations, except when advertised in an objectionable manner."

In the advertising of antiseptics, germicides and disinfectants directly to the general public, the first and only consideration should be the public welfare, and two distinct divisions of the question may thus be formulated:

1. Shall the exploitation to the public of antiseptic, germicidal and disinfective preparations (already accepted for inclusion with New and Nonofficial Remedies) be permitted when these preparations are to be used on the human body?

2. Or, shall their exploitation be limited to recommendations for veterinary use or for uses other than those on the human body?

The arguments advanced in favor of the first division are:

A. The general public is constantly using some antiseptic solutions, advertised for cuts, bruises, and other external injuries. Why should not the public be aided in selecting the most effective preparation?

B. Antiseptic mouth-washes, tooth powders, etc., are commonly used without consulting a physician. The employment of efficient substances for these purposes is beneficial, and it would be a distinct benefit were the public given more definite instruction regarding their use, particularly for prophylaxis.

C. Ordinarily the use of antiseptics for the above-mentioned purposes is not likely to handicap the physician in his efforts to conserve the public health.

It must be admitted that the general use of safe, non-proprietary antiseptics and germicides like boric acid and hydrogen peroxid does much good and little harm. The public is fairly well informed concerning both the advantages and limitations of these remedies, because no one is interested in misrepresenting their action or exaggerating their merits. The situation is different with regard to proprietary antiseptics. The constant tendency is to assure the public that the remedy is a sure preventive or cure of all kinds of diseases and to encourage its use in all conditions. Thus the public is led to feel a sense of safety in the presence of danger and this often keeps the individual from obtaining that treatment which is necessary to prevent serious illness. The advertising of proprietary antiseptics, germicides and disinfectants by means of pamphlets and circulars accompanying the trade package is particularly objectionable and liable to be harmful to the public, if the claims are exaggerated or if the article is recommended as a treatment of specified diseases.

One needs only to recall the advertisements in the lay press, during a recent epidemic of meningitis, of a proprietary antiseptic preparation which, it was claimed, would prevent and cure the disease if applied to the mucous membrane of nose and throat. Likewise the use of another proprietary antiseptic preparation exploited to the public by means of recommendations accompanying the trade package has lured many a victim of venereal diseases into a sense of safety and thus deprived him of proper treatment.

Tragedies of this nature are bound to occur with inefficient remedies dishonestly exploited. It is to be determined whether the sanction of the Council on Pharmacy and Chemistry for conservative advertising to the public of good antiseptics, germicides and disinfectants for the purposes indicated would decrease or increase the number of such mistakes.

Experience shows that proprietary brands of hydrogen peroxid, an otherwise most valuable germicide, have been falsely advertised to the public, in the lay press, or by means of circulars accompanying the trade packages, in such a manner as to encourage the belief that they are capable of preventing diphtheria, tetanus and other diseases amenable to cure only by proper medical measures.

The following paragraph (quoted from the comments on Rule 3 in New and Nonofficial Remedies) pointing out the objections of lay advertising of proprietary remedies in general applies with equal force to the dangers of advertising antiseptics and germicides to the public:

"The impossibility of controlling the irresponsible claims which are usually made in advertisements to the public, the well-known danger of suggesting by descriptions of symptoms to the minds of the people that they are suffering from the many diseases described, the dangers of an unconscious and innocent formation of a drug habit, and the evils of harmful self-medication, including the dangers of the spread of many infectious and contagious diseases when hidden from the physician, and similar well-known considerations are the reasons for discouraging, in the interest and for the safety of the public, this reprehensible form of exploitation."

It is our opinion that the harm likely to result from lay advertising of proprietary antiseptics, germicides and disinfectants for use on the human body, except as a means of prophylaxis, far outweighs the possible good.

The advertising of antiseptics, germicides and disinfectants for veterinary use and as a means of prophylaxis is not open to the same criticisms. Especially is truthful advertising of disinfectants for privy vaults, manure heaps, stagnant pools of water, soiled clothing, etc., a valuable means of educating the public in these matters of sanitation.

It appears to the committee that proper advertising to the laity of disinfectants for veterinary and non-medicinal use does not imperil the health of the community, as is the case with preparations used for medicinal purposes. On the other hand, it is to the interest of the public to receive reliable information concerning the value of these preparations for the prevention of disease and concerning the best methods for their employment.

At the present time inferior preparations are found in a large proportion of households, and the Council would thus confer a real boon to the public by endorsing reliable preparations. It is therefore recommended that the Council permit the advertising to the public of antiseptics, germicides and disinfectants accepted for inclusion with new and Nonofficial Remedies, and that the following should be added to Rule 3 of the Council:

The advertising to the public of antiseptics, germicides and disinfectants accepted for inclusion with New and Nonofficial Remedies shall be permitted, provided that it be limited to conservative recommendations for their use as prophylactic applications to superficial cuts and abrasions of the skin and to the mucous surfaces except those of the eye and the gastro-intestinal and genito-urinary tracts. In no case shall it include recommendations for use as curative agents, nor shall the names of any diseases be mentioned in such exploitation.

If the preparation is sufficiently toxic to require caution in its use to prevent poisoning, this fact shall be stated on the label.

Business Methods of Profession.—Meet your own obligations to your creditors and make your debtors meet theirs. Do your part of real charity, or all of it if you wish, but require people who can pay you to do so, they will think more of you and you of them. Be just in your charges and collect them, but don't render nominal service thinking to increase gratitude or hold patronage, for it will not do it. Measure your fee by the value of your service. Don't make other people pay for your own mistakes so if you haven't knowledge, then get knowledge, for there is plenty for sale. But don't get too wise, especially in your own conceit. Don't know it all, leave a little for the other fellow to prevent atrophy and stasis when you are gone. Try to be professional if they will let you. Be charitable to the old doctor and merciful to the young. Don't be the dog in the manger, but be a gentleman of culture and character, a laborer of energy and purpose, and a good doctor who conserving all the rich elements of manly virtue hopes only for that which is wisest and best and strives to attain it.—E. G. Moore in *Old Dominion Journal of Medicine and Surgery.*

Association News

A NOMENCLATURE OF DISEASES FOR THE UNITED STATES

A precise nomenclature of diseases is very important for the advancement of medical science and is absolutely essential for thoroughly comparable statistics of general mortality, morbidity, and for hospital statistics, as well as for the comparison of individual results. The need for such a nomenclature is becoming yearly more urgent, with the rapid extension of the registration area for vital statistics, the application of more refined clinical and laboratory methods for the differentiation of diseases, and with the greatly increased knowledge of the causation of diseases and the special interest now taken in diseases of the tropics. The great desideratum would seem to be that each definite pathologic entity should have one definite name, by which it could be everywhere recognized, and concerning the precise application of which there would be no shadow of doubt. Questions of classification, or even of the best names for given diseases, would seem to be of less practical importance than the general agreement on accepted or authoritative names, which could thus be employed by physicians in a precise way. The present condition is analogous to what would obtain in the practice of medicine if the writing of prescriptions were hampered by the use of several names, more or less synonymous, for each article of the Pharmacopeia, instead of having a single precise official name.

The remedy is plain and the Committee on Nomenclature and Classification of Diseases, originally constituted by the American Medical Association in 1907, will present at the next meeting of the Association at Atlantic City in June, 1912, a draft of a provisional or tentative nomenclature of diseases and conditions, which it is hoped may be published by the Association and thus put at the service of the profession in this country for immediate practical use. It will be based largely on the excellent Bellevue Hospital Nomenclature, prepared by the Committee on Clinical Records of Bellevue and Allied Hospitals, New York, and rearranged by that committee in cooperation with the American Medical Association's Committee, then under the chairmanship of the late Dr. Frank P. Foster, in accordance with the International List of Causes of Sickness and Death. This system has now been adopted by a large number of countries and very complete manuals, showing the assignment to its titles of all terms reported by physicians, have lately been published by the United States Bureau of the Census and by the Registrar-General of England. Such manuals, however, are designed for the use of statistical offices only and not for general reference by physicians, inasmuch as they necessarily provide for a large number of indefinite and unsatisfactory terms that occur upon certificates of cause of death. The Bellevue nomenclature contains only fairly precise terms and has been adopted, with excellent satisfaction, by many hospitals in this country besides those for which it was especially prepared. Surgeon-General Torney has recently issued a supplement to the manual for the Medical Department, United States Army, which contains a nomenclature for the guidance of the medical officers of the regular army and the organized militia of the United States arranged largely in the order followed by the Census Office and the Bellevue nomenclature. Nevertheless, for the profession as a whole, no complete and convenient authority on the nomenclature of diseases, with special reference to the correct reporting of causes of death and sickness, is available, although the little "Physicians' Pocket Reference to the International List of Causes of Death,"[1] which was distributed not long ago by the Bureau of the Census to all physicians in the United States, has to some extent familiarized practitioners with the form of the International List and helped to secure more definite statements of cause of death.

1. Copy can be obtained on request from the Director of the Census

The field of usefulness of the proposed nomenclature will therefore be a wide one, and it will be especially serviceable if, as the Committee desires, it be regarded not as a finality but as a first step in the preparation of a complete international nomenclature, with all necessary definitions and with suitable revision with respect to classification, that may serve as a basis for the next or Third Decennial Revision of the International List of Causes of Sickness and Death. Thus will the statistical lists prepared for the compilation of general mortality and morbidity statistics, the lists for hospital statistics, and the underlying nomenclature of diseases and pathologic conditions be at last brought into complete harmony, as proposed by the resolution adopted by the House of Delegates at Chicago, June 3, 1908:

Resolved, By the American Medical Association: . . .

That after the revision of the International Classification in 1910 [changed by the French Government, at the request of the United States, to 1909] the Nomenclature of Diseases be recast in corresponding form, so that there will be available under a uniform arrangement and with precise agreement in the meaning of terms (1) International Classification [preferably *List*] of Causes of Death; (2) International Classification [List] of Sickness and Disability; (3) International Nomenclature of Diseases and Injuries.

There are still some objections to the present form of the International List of Causes of Death and Sickness, many of which relate to more or less theoretical questions of classification (now regarded as relatively unimportant) and some of which disappear when the nature and practical use of a statistical list are fully understood. For example it has been objected, by Dr. Jorge Le-Roy y Cassá,[2] Chief of Statistics of the Public Health Department of Cuba, that—

> Under the title "recurrent fever" we find included recurrent fever and Malta fever and its synonyms. How is it possible to group under the same title the disease caused by *Spirillum obermeieri* and that caused by *Micrococcus melitensis*? Even though the recurrent febrile periods might make them comparable, yet the fact that they are produced by different organisms should put them in separate groups.

The explanation is very simple. No identity is assumed for the terms, grouped as a matter of statistical convenience, under the international title "relapsing fever." In nearly all countries the deaths from either relapsing fever or from Malta fever are so few that it is of no statistical consequence whatever that they should be distinguished separately. The content of the title "relapsing fever" is known to the medical statistician, and if the total number of deaths thus included should be sufficient to warrant it, separate statements of the deaths from relapsing fever and from Malta fever (recently occurring in Texas) may be given, as is in fact provided for in the Bellevue nomenclature:

> 3. Relapsing fever:[3]
> 3A. Malta fever.
> 3B. Relapsing fever.

In the same way any other title of the international list can be subdivided to give any desired precision of statement, but the totals corresponding to the titles will remain comparable with the totals from offices that do not find the subdivision necessary. It may perhaps be said that as both Malta fever and relapsing fever are usually unimportant, it would have been well to include them as part of International Title 19, "Other Epidemic Diseases," stating them individually only when the number of deaths or cases of sickness justify such

2. American Journal of Public Health (The Journal of the American Public Health Association), January, 1912.

3. The title need not in fact appear in the tabular list, but only the subdivisions, thus:

> 1. Typhoid fever.
> 2. Typhus fever.
> 3A. Malta fever.
> 3B. Relapsing fever.
> Etc.

The international reference numbers are retained so that comparisons can be made readily and with certainty with the statistics of any country employing the system. As a matter of fact, there was only one death from relapsing fever in the registration area of the United States for the year 1910 out of 805,412 from all causes, and only two, on the average, for the period 1900-1909.

V. 58
1912

procedure. This change, however, cannot be made until the next meeting of the International Commission, and it would be unwise to make unauthorized rearrangements until that time because such changes, which are usually quite unnecessary, disturb the international comparability of the data.

The question of a proper *nomenclature*, however, is quite a different one from the question of classification or the propriety of the inclusions of the international titles. In the example cited above, the committee is concerned at present only as to what is the proper name to be selected as the authoritative designation for these diseases. Shall we distinguish the *relapsing fever of Europe* [Synonyms: febris recurrens, five days' fever, spirillum fever, five days' fever with relapses, typhus recurrens, seven days' fever (not Rogers'), icteric typhus, remittent fever, bilious typhoid, epidemic remittent fever, miliary fever, relapsing fever], the *relapsing fever of America*, the *relapsing fever of India*, and the *relapsing fever of Africa*,[4] and for Malta fever, shall we prefer *undulant fever, Mediterranean fever, Malta fever, Bruce's septicemia, Gibraltar fever, Neapolitan fever, Cyprus fever, febris undulans, febris sudoralis?* If there are several definite specific diseases to be distinguished, then a definite specific name should be applied to each, and used for it alone and for no other disease. The confusion of synonyms and of near-synonyms is appalling and destructive of accuracy in all descriptive and statistical work. Hence the great problem is the definite naming or selection of the best name, for it is apparent that the reform or reconstruction of names already in general use and acceptance would be an insuperable task and one not at all likely to yield practical results.

The Committee will therefore appreciate any suggestions from physicians as to the preferable names to be included in the nomenclature and also as to terms that should be disused. So far its work has related entirely to English terms, except of course when no English terms are available, in which case the Latin or Anglicized Latin terms must be used. It is hoped that later on cooperative work may be undertaken with the Committee of the Royal College of Physicians of London, which will probably soon be constituted to prepare the next decennial revision of the nomenclature of that college, so that a uniform nomenclature will be available for all English-speaking physicians throughout the world. In the meantime, however, a provisional nomenclature will be of great service, and the interest and aid of the profession will be welcomed by the Committee.

CRESSY L. WILBUR, M.D., Chairman,
Bureau of the Census, Washington, D. C.

Correspondence

Treatment of Pneumonia

To the Editor:—I have just read, under Therapeutics, the treatise on pneumonia in THE JOURNAL for March 30. I would not detract an iota from that most excellent article. It is all good. I wish only to add an observation from personal experience as follows:

In this great southwest there was a time when the average family lived and multiplied and got sick and died in that primitive habitation called a dugout. It was the best that could be done at that time. The country was new and building material was expensive. In those days physicians learned a great deal about practical therapeutics, the like of which is seldom found in books. Among other things they found that pneumonia patients died in the dugout, not every time, but entirely too often. They found that a cyanosed patient would rapidly regain his normal color if taken out of the dugout and placed in the fresh air on top of the ground, no matter how cold the weather, or how wet or how hard the wind blew. After the people had houses to live in it was somewhat better, but the kind neighbors still insisted on coming to sit up. Sitting room was often at a premium, and fuel being high and hard to get, there was often but one source of heat for the "sitters," the family and the sick.

More than once have I seen fifteen people in one room on a cold night, with a red-hot stove, doors and windows closed, come to sit up with a suffocating pneumonia patient. I have taken the same patient, placed him between an open window on the north and an open window on the south, so that a 40-mile-an-hour wind could blow across him, and have stood with my overcoat on between the bed and those fifteen friends of his till the last one of them had been frozen out of the house. Treat a patient like that, suffering from what I call pneumocyanosis, and he will fight for the open door ever afterward. Another advantage is in getting rid of the loafers.

S. H. LANDRUM, M.D., Altus, Okla.

Boiling Cocain Hydrochlorid

To the Editor:—In light of recent contributions as to the sterilizing by boiling of solutions of cocain hydrochlorid for use in local anesthesia, my experience may be of interest to some readers.

In my dispensary work as district physician for the Isthmian Canal Commission, I am daily called on to perform minor operations in which cocain solution is used to induce the desired anesthesia. I invariably use a 1 per cent. solution and I invariably boil my solution for about two minutes over a spirit lamp before injection. I have never failed to obtain the anesthetic action of the drug and I have had no untoward symptoms in my patients. In such clean cases as digit amputations, circumcisions, etc., I know that by boiling my cocain solution I shall have no infection from the water used, which may have previously been faultily sterilized or may have become contaminated while standing, nor is there danger from the cocain itself, which may have become contaminated while being handled or while standing in the bottle.

The chemical change that takes place while boiling the solutions must be so slight as not to be worth considering in actual work, as the results obtained have been in every way satisfactory after this method of sterilizing.

ALFRED G. FARMER, Corozal, C. Z.

Messrs. Squibb & Sons Explain About Thoremedin

To the Editor:—In THE JOURNAL for March 9 (p. 716) there appeared an article by Dr. William Allen Pusey, attacking Thoremedin. In the same issue (p. 706) there appeared an editorial which, assuming that Dr. Pusey's conclusions were correct and incontrovertible, also condemns the remedy.

The charge that we should be capable of furnishing to the medical profession a product, the composition of which we intended to keep secret is, in the light of the well-known ethical character of our house, incomprehensible, and especially so in view of the printed announcement in the January number of *Squibb's Memoranda*, where it was plainly indicated that the publication of the quantitative formula was delayed only for good and sufficient reasons and was to follow in due course. This was certainly the meaning we intended to convey—our purpose being to have the Thoremedin products, as furnished by us according to the Semerak directions, given a broad trial by the American dermatologists, before the use of imitations (such as extemporaneous mixtures) would expose the new remedy to discredit and also in order to ascertain more definitely the limitations of the new remedy before allowing the formula to go into medical literature. This course was deemed necessary in the best interests of the medical profession.

We frankly admit that we made a mistake in not furnishing, at once, the quantitative formula. Our course was open to misinterpretation, but was an error of judgment only. We give now the quantitative composition with every package.

The name Thoremedin was chosen because thorium, although present in but a small percentage, was considered an essential ingredient and mainly responsible for the therapeutic efficiency of the product. Whether thorium actually does play so important a part in the composition should, in view of the controversy that has arisen, be ascertained by further clinical trials.

4. Castellani and Chalmers: Manual of Tropical Medicine.

The therapeutic statements contained in *Squibb's Memoranda* were not our own, but those of American dermatologists whose judgment we had every reason to trust. We are perfectly willing to have the Council on Pharmacy and Chemistry investigate Thoremedin with the view of either proving or disproving those statements; and, believing that Dr. Pusey will also be willing to accept the findings of the Council, we have this day made formal application to the Council for its assistance in this matter. We shall abide by the decision of the Council. To get at the facts has been throughout our anxious desire and if we were misled we certainly desire to know it at the earliest possible moment. As for the rest, we merely wish to state that we agreed to undertake the manufacture of the remedy only after it had been used by a number of dermatologists in this country with results that could leave no doubt in our minds as to the merits of the preparation. From the very moment when the request was made to us to manufacture the product to the present, our conduct has been inspired by the same ethical considerations that have always characterized the house of E. R. Squibb & Sons since its foundation.

May we submit the following copy of a letter addressed by us to Dr. L. Duncan Bulkley nearly a year and a half ago?

NEW YORK, Oct. 18, 1910.

Dr. L. Duncan Bulkley.

Dear Sir:—A Mr. C. B. Semerak of Paris called on us some time ago for the purpose of enlisting our cooperation in the manufacture and marketing to the medical profession of a remedy for the treatment of certain skin diseases.

This remedy, devised by Mr. Semerak, he claims has been in actual use in the Saint Louis Hospital of Paris, under the direction of leading specialists, and with excellent results. In support of these claims he submitted to us many original communications of the dermatologists who have employed the remedy, all of whom speak in high terms of the results obtained. He further submitted to us a series of photographs taken before and after treatment, all of which seem fully to uphold his claims.

In obedience, however, to our well-known determination never to furnish under our label any product the usefulness of which in the minds of the medical profession is not absolutely ascertained, we cannot undertake the manufacture of Mr. Semerak's remedy, notwithstanding all the evidence which he has placed before us in support of his claims, unless the remedy is approved by unquestionable American authority.

Mr. Semerak now informs us that his remedy has been used for several weeks past, and is used to-day, under your personal direction in the New York Skin and Cancer Hospital; that you intend to soon make a full report of the results obtained by you with the remedy.

Under these circumstances we deem it our duty to communicate to you our attitude in this matter, and hope that you will let us have, at your convenience and when you feel ready, such advices as will guide us toward a correct decision. We are, of course, ready to serve you and the medical profession in general if in your judgment such service is required.

The above letter will prove, better than anything else we can say to-day, our attitude in this matter.

E. R. SQUIBB & SONS,
THEODORE WEICKER, Vice-President.

[COMMENT: See Editorial Department.—ED.]

Hare-Lip and Eugenics

To the Editor:—The undersigned are engaged in a study of heredity of hare-lip, cleft palate and associated malformations of the oral cavity, and solicit correspondence with physicians who can supply histories of families, more than one member of which has an oral defect. Such data will be held as strictly confidential and will be used solely to aid in the solution of a problem which is not only of scientific but also of humanitarian interest.

C. B. DAVENPORT,
W. F. BLADES,
Eugenics Record Office, Cold Spring Harbor, Long Island, N. Y.

Triplets Living at Seventy

To the Editor:—For such professional interest as it may have, I desire to make record in THE JOURNAL of the fact that triplets, all surviving in good health, celebrated their seventieth birthday at Chester, Pa., Feb. 24, 1912. They are the children of William West and Martha (Dutton) West, born at Shepherds' Plain, Chester Township, Delaware County, Pa., Feb. 24, 1842. Their names are Elias H. West (married, one daughter), still an active farmer; Kate D. West (unmarried), an active member of the Society of Friends; and Rachel P. (West) Leys (widowed, one son, the present writer), for thirty years a teacher of mathematics in the Friends' Schools of Philadelphia. The father of these triplets died in 1885 at the age of 87. Their mother died in 1894 at the age of 83, the triplets being at that time 52 years of age.

It would be a matter of considerable interest to this family to learn if any instance of similar longevity in triplets is known to any physician in the United States or elsewhere.

JAMES F. LEYS, U.S.N., Newport, R. I.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

RELATIONS OF CONSULTANT TO PATIENT AND ATTENDING PHYSICIAN

To the Editor:—In answer to W. L. M. ("Method of Procedure When Supplanted by Consultant," THE JOURNAL, March 2, p. 649), you say that the attending physician can be discharged and that the consultant can take the case after the discharge of the regular attendant. I most emphatically dissent. Such conduct would strike at the very root of medical ethics. It would be a death-blow to consultations. Unless it were absolutely unavoidable no man would risk a consultation if he thought he might be supplanted by the consultant. I have thought sometimes that I was called in consultation for the very purpose of eliminating me from the case.

A few months ago I was called to see a case in consultation. I advised an operation at some future date. A couple of months later the patient walked into my hospital and said that she was ready for the operation. I explained to her that she was Dr. E's patient; that the only way I could operate on her would be for her to come to me from him. She of course demurred, but I absolutely refused to operate unless she brought me a note from her physician. Her physician called me on the telephone, differed with me as to certain steps of the operation, and the next I heard was that he had taken her to another hospital. This he had a perfect right to do.

Let me repeat that the consultant has no right whatever to have any dealings with the patient during the sickness for which he was called as consultant. If at some future time the patient desires the consultant to become his regular attendant he could do so, but it always looks bad. You speak of the interests of the patient being paramount. Let the consultant stick to the attending physician first, last and all the time, and the interests of the patient will not suffer.

A. P. BUTT, M.D., Davis, W. Va.

ANSWER.—Reference to the comment criticized by our correspondent will show that he bases his argument on conditions differing both from the instance of A and B and from that of C and D. When the patient presented herself at his hospital, our correspondent was right in regarding himself as still the consultant in the case and in insisting on the consent of the attendant before he took charge as the surgeon. A consultation over a telephone has many disadvantages, especially when there is a question concerning which there may be disagreement. When the attendant and the consultant fail to agree, it is proper that the consultant withdraw from the case as our correspondent did. He should assure himself, however, that the patient, or the friends of the patient, know his views concerning the case, for the consultant was employed that his opinion might be obtained. In justice to the patient and himself, he should in the presence of the attendant state the results of his investigation and his conclusions in the case. This can be done without comment on the position held by the attendant and without reference to any disagreement existing between the physicians. The attendant and the patient were within their province when they called another consultant or employed a surgeon to do what the attendant considered to be the operation to be elected.

We understand that our correspondent dissents from our statement, "The right of the patient to choose her physician must be recognized," yet this right belongs to the patient and must be acknowledged. But in the exercise of the privilege of selecting her medical attendant, the patient should not give cause for unpleasant feelings between the physicians interested. Unfortunately, physicians sometimes do fail to respect rights of patients. Occasionally they present courses of procedure, perfectly adapted to meet the ethical requirements of the case, in so tactless a manner that the patient receives the impression that "medical ethics" is merely a mutual understanding among physicians, shrewdly misnamed, for depriving those outside the medical profession of freedom of choice in

dealing with physicians—a sort of most reprehensible trade-union domineering over the sick. If a patient feels that medical ethics permits his "case" to be treated as a "property right" of a physician, he is naturally offended, and, feeling that his personal liberty has been infringed on, he is apt to show antagonism toward the medical profession and whatever he thinks the profession stands for. Moreover, while it must be acknowledged that a sick person and even the friends, over-anxious because of their affection for the patient, may act unwisely—even may be unreasonable—the physicians interested in the case can always freely, but dispassionately, discuss the conditions under which they find themselves in their relations to each other and to the patient. If each physician both merits from and accords to his confrères the perfect trust they all expect from the patient, such a discussion will lead to a mutual understanding concerning the course of conduct that will both meet the reasonable wishes of the patient and protect the interests of each of the physicians. It can seldom be possible to satisfy all parties completely; but it is possible for the consultants to preserve their own self-respect and the esteem of each other and of the patient even when the course chosen is the result of mutual compromise.

While we failed previously to announce in explicit terms the principle attributed to us by our correspondent, namely, that in consultations and at all times the interests of the patient should be paramount, we now hasten to repair this oversight. No consultation should be held that does not have as its first object the protection and promotion of the patient's interests. In a word, the actions of all parties to a consultation should be controlled by that principle of ethics which requires each to treat the other as he would be treated were he in that other's place. To follow this principle honestly will modify the conduct of the attendant and of the consultant as conditions vary. At all times, it forbids either doing an injustice to the other; yet the interests of the patient constantly remain paramount.

A SHOTGUN PRESCRIPTION FOR A MOUTH WASH

To the Editor:—I am sending you a copy of a prescription I have produced for use as a gargle and mouth wash in inflammatory diseases of the mouth and fauces. I have been led to believe that it possesses excellent antiseptic properties from the favorable results I have had with it on board ship. I shall very much appreciate your opinion in regard to its therapeutic use.

℞	Gm.
Boric acid	10.0
Sodium borate	10.0
Glycerin	25.0
Phenol	3.0
Benzoic acid	1.0
Thymol	1.0
Menthol	1.0
Eucalyptol	1.0
Oil of peppermint	1.0
Alcohol	150.0
Purified talc	10.0
Water to make	500.0

M. Ft. Sol. Sig.—Use as a gargle or mouth wash.

Dissolve the boric acid, sodium borate, glycerin and phenol in 350 c.c. of water and the benzoic acid in 100 c.c. of alcohol and pour the aqueous solution into the alcoholic solution. Now dissolve by trituration in a mortar the thymol and the menthol in the eucalyptol and oil of peppermint. With this thoroughly incorporate the purified talc and add, with constant trituration, the solution first prepared; then allow to stand, with occasional agitation, forty-eight hours, filter, add 50 c.c. of alcohol to clear filtrate and then enough water to make the finished product measure 500 c.c.

R. O. N., Hospital Apprentice, U. S. Navy.

ANSWER.—This mouth wash resembles the numerous preparations which have been devised for the purpose of exerting an antiseptic action in the oral cavity. If one will go through the catalogues of pharmaceutical houses, he will find a long list of such preparations, varying slightly in their ingredients but having the same general composition. They undoubtedly spring from the Dobell solution, liquor sodii boratis compositus, N. F., which has been in use for a long time. The modifications of this solution have been largely made with the idea of making the preparation more pleasant and to achieve this purpose, the principal ingredients of the original, that is, the sodium bicarbonate and borax, which are responsible for the alkalinity have largely been left out. For the treatment of the mouth an alkaline solution is very useful for the purpose of dissolving mucus and thus mechanically removing much of the fermenting mass, which consists frequently of food particles enclosed in a tenacious mucus. The introduction of numerous ingredients into these mixtures for the purpose of giving them a pleasant taste or with the claim of rendering them antiseptic has led to a considerable degree of confusion and mysticism in the mind of the practitioner, a condition of which the nostrum maker has been prompt to take advantage. It is time to call a halt in the making of these mixtures which exemplify the tendency to polypharmacy and to ask ourselves what is the object of such a confusing association of ingredients.

Presumably for the purpose of antisepsis, the author of the formula which we have under consideration introduced at least eight different so-called antiseptics. It may be questioned, in the first place, what need there is of antisepsis in a mouth wash. The antiseptic action is of value only where the antiseptic is to act for some time on the mucous membrane or the contents of a cavity. A mouth wash is used for the temporary cleansing of the mouth and is not to be supposed that its antiseptic ingredients will remain in the mouth in an efficient concentration for any length of time, and this limits its value. But there is no need of applying an antiseptic to material that is to be removed from the mouth and which can, if necessary, be destroyed or rendered sterile by an efficient germicide. It is just as well to cleanse the mouth mechanically or by means of the solvent properties of the mouth wash without especial reference to any antiseptic action; but if an antiseptic is needed why is not one such ingredient sufficient? Thymol in a solution of 1 to 1,000 is an efficient antiseptic; why not therefore be content with the antiseptic action of the thymol which is present in this prescription in double antiseptic strength; that is, 1 to 500?

ROUTE OF ENTRANCE OF HOOKWORM DISEASE

To the Editor:—Is it believed that the skin is the only route of entrance of hookworm disease? F. M. TEAS, Denison, TEX.

ANSWER.—That is not the universal belief. The possibility of the disease being caused by the ingestion of the worms or larvæ by the mouth cannot be denied but the occurrence of this mode of infection in man has been neither satisfactorily proved nor disproved.

The general opinion, however, seems to be that infection by the mouth is extremely rare and that the usual mode of infection is through the skin. George Dock and Charles C. Bass, in "Hookworm Disease," say: "We believe that we are justified in concluding that the real source of hookworm infection is always the feces of infected persons, and, further, that the only practical mode of infection is by the skin. Walking barefoot in infected mud and water is the chief way in which infection gets to the skin. Probably next in importance is infection through leaky and wet shoes. Other modes of infection are possible, and no doubt do occasionally occur, but comparatively they are of little importance."

Dr. Hiram Byrd, in "Hookworm Disease," a pamphlet prepared under the direction of the state board of health of Florida, says: "The most, then, that can be said of mouth infection in human beings at the present time is that it is still unsettled, but the preponderance of evidence would indicate that if it occurs at all, it is very rare. It is true that the earlier writers considered the mouth the only avenue of entrance; but in 1902, Looss showed that infection takes place through the skin. Then for a time the mouth was considered one of the sources of infection. But now, mouth infection is coming to be considered more and more as negligibly rare or absent altogether.

LIMITED POWER OF GLYCERIN TO COUNTERACT PHENOL

To the Editor:—My druggist informs me that he sells a large amount of equal parts of glycerin and phenol (carbolic acid), which is used for poisoning from poison oak. Cloths are saturated with it and spread freely over large surfaces. In thinking of the danger that attends this practice it occurred to me that the glycerin might neutralize the poisonous nature of the acid. Can you furnish any information? W. C.

ANSWER.—Glycerin, like alcohol, will lessen the caustic local action of phenol on the skin, but experience shows that it will not prevent the production of gangrene, which has fre-

quently occurred when a finger or other part was completely surrounded by a dressing wet with a solution of phenol. This gangrene does not so readily occur, however, when dressings are applied to large surfaces of the body, probably because the poison is rapidly carried away by the free circulation.

HAARLEM OIL POISONING

To the Editor:—I recently had a case of suspected Haarlem oil poisoning and I am unable to find out what Haarlem oil is or what its action is. Please give me this information.

I will take this opportunity to congratulate you on your campaign against the nostrum evil and its supporters, and, although my congratulations do not help much, a word of praise from an unexpected quarter often helps to lighten the load and makes a person think the work does more good than can ever be found out.

A. W. Patterson, Linden, Iowa.

Answer.—Preparations sold under the name of Haarlem oil are of an indefinite composition and probably frequently contain ingredients which would be more poisonous than those of the published formula. The formula is given by Richter (Hager: "Handbuch der Pharmaceutischen Praxis," ii, 299) as follows: Balsam of sulphur (oleum lini sulfuratum, prepared by combining dry sulphur with linseed oil, by means of heat) 1,000 parts, poppy-seed oil 125 parts, olive oil 60 parts, juniper oil 8 parts and oil of rosemary, oil of cinnamon, and oil of cloves, each 2 parts. If the mixture is taken internally poisoning might arise from the sulphur or from the oils of juniper, cinnamon and cloves. Oil of juniper would be likely to produce irritation of the kidneys. From our knowledge of the pharmacologic action of sulphur compounds we would expect intestinal irritation and flatulence to follow an overdose. Since, however, the composition is so uncertain and the dose is not definitely known, we are unable to state positively what symptoms would follow an overdose. The methods employed years ago by the exploiters of Haarlem oil were discussed in The Journal, May 23, 1908, p. 1714. A case of misbranding under the federal Food and Drugs Act of Haarlem oil capsules was reported in The Journal, Oct. 28, 1911, p. 1472. Some of the synonyms for Haarlem oil are: Dutch drops (guttæ Hollandicæ), Tilly's drops and empyreumaticum Batavicum.

NOT A SQUARE DEAL FOR THE PHYSICIAN?

To the Editor:—Speaking as a physician just beginning the practice of medicine (a supposition contrary to fact), I am moved to inquire: Of what interest to me is your note of March 16, p. 787, "Not a Square Deal for the Physician"?

Does it teach me, when I want acetphenetidin, to buy it as such and not as phenacetin? Perhaps; but why should I buy either, since my advisers in paths medical so uniformly discourage dispensing? (Although, being a dispenser in spite of advice, I have long acted as here suggested.)

Does it teach me to regard my patients' pocketbooks in prescribing? Perhaps, but druggists charge for the filling of prescriptions according to the number of doses rather more than the cost of the drugs used. (While probably not true as to all druggists or in every case, I believe the above statement to be substantially accurate.)

Does it teach me always to consider the profits of the druggist? Most certainly it does. (He does, however, so much counter prescribing that, at times of irritation, I might be tempted to say, "I don't care a hang about his profits.")

Seriously now, I am glad to learn from the report of the Association Laboratory, March 16, p. 801, that my confidence in the identity of phenacetin and acetphenetidin has been well placed.

G. W. M., Heber, Cal.

Comment.—We wonder how many others, after reading the comment referred to, did even a small fraction of as much hard thinking as did our correspondent.

BOOKS FOR LIFE-INSURANCE EXAMINERS

To the Editor:—Please give a list of books likely to be of use to a chief medical examiner of an old-line life-insurance company.

X. Y. Z.

Answer.—The following are considered some of the best books along the lines referred to:

Hall: Medical Examination for Life-Insurance, Simpkin, Marshall, Hamilton, Kent and Co., London, price, $1.50.

Ramsay: Medical Examination for Life Insurance, J. B. Lippincott & Co., Philadelphia, price, $1.25.

Symonds: Medical Examination for Life Insurance, Putnam's Sons, New York, price, $1.

Green: Medical Examination for Life Insurance, Blakiston's Son & Co., Philadelphia, price, $4.

The Public Service

Journal Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

Medical Economics

This Department Embodies the Subjects of Postgraduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

NEWSPAPERS ON PUBLIC HEALTH

Perhaps the most hopeful sign in the present public health situation is the vastly increased and constantly increasing interest being taken in public health questions by our leading newspapers. From a large number of comments on public health topics recently received, ten leading editorials were selected as noteworthy on account of the advanced position on health questions taken by the writers. The papers in which these editorials appeared were the New York *Sun*, the Chicago *Journal*, the New Orleans *Democrat*, the Syracuse *Post-Standard*, the Battle Creek *Enquirer*, the Fresno (Cal.) *Republican*, the Grand Rapids *News*, the Greenville (Ohio) *Democrat*, the Rochester *Post-Express* and the Minneapolis *Tribune*. The wide distribution of these newspapers is sufficient evidence of the general interest in public health topics. Unfortunately, lack of space makes it impossible to present quotations from all these excellent editorials in the present issue, but a few extracts will be of interest to our readers.

The Syracuse *Post-Standard* starts the ball rolling with an excellent editorial on "Criticizing the Doctor."

"Medical orthodoxy has not been much more immune to criticism than religious orthodoxy has. If on the one hand men have been burned at the stake for reading the Bible or stoned to death for preaching Christianity, on the other hand the loss of life from the practice of medicine according to the school that has from time to time been orthodox, has not been small. The practice of medicine has spent a great deal of time in groping toward the light, and there are not many who believe that it has yet reached full and perfect illumination.

"Honest criticism and competition, therefore, should be welcomed by members of the prevailing body of opinion in the profession of healing. It is exasperating to them and to all sensible folks to see the number of persons who choose to trust their lives and the lives of their children to methods of healing that are frankly and obviously unscientific, but the law, no matter how urgently appealed to, cannot go beyond a very moderate limit in forcing people to shun any method that may appeal to them.

"The law can, should and does say something about fake remedies for disease, and guaranteeing the cure of consumption, cancer and the like, and the American Medical Association has rendered notable aid to the cause of square dealing by its agitation against quacks and nostrums. Against its efficiency in that respect its most violent critics can have nothing to say. These critics, and in particular the small but excitable periodical called *Medical Freedom*, are in particularly poor business when they make jokes on such subjects as the campaign against yellow fever in the tropics and against inoculation against typhoid. The American Medical Association deserves more dignified and sensible opposition than can be furnished by a periodical which hasn't yet learned that the war against the mosquito is what made possible the building of the Panama canal."

A neighbor, the Rochester *Post-Express*, discusses "Medical Progress" in the light of Dr. Welch's recent New York address. It says:

"It is not unusual for persons who take pessimistic views to belittle the work of the great medical profession. But facts, which are stubborn things, proclaim the marvelous achievements of the doctors in no ambiguous fashion. Dr. William H. Welch in his address at the forty-third anniversary of the Presbyterian Hospital in New York cited statistics which prove that during the past half-century twelve years have been added to the period of human existence. Since the first records were taken in New York City in the sixties, the rate of mortality has been reduced from 35 deaths in each thousand to 15 in each thousand."

After commenting on Dr. Welch's discussion of the duty of a university to aid medical research, it continues:

V. 58
1912

"The welfare of mankind is the aim of the physician. As civilization advances it will be more clearly realized by even the most conservative members of the medical profession that prevention is better than cure. The preservation of the public health must really promote the interests of the profession generally, for we need the doctor to prevent us from contracting disease as much as to conquer it when we have contracted it."

The Minneapolis *Tribune*, in an editorial on "The Pursuit of Quackery," comments with discrimination on the efforts of the Hennepin County Medical Society to suppress medical frauds. This editorial is worthy of being reprinted in full, but space will permit only a few paragraphs. The editor says:

"No wonder the Hennepin County Medical Society has gotten into a mess, with the best intentions in the world of high public service. It is trying, like many other American societies, to perform a duty that should not be put on any profession, least of all that sworn to the noblest human service.

"The medical profession has enough to do without being put on the defensive against those who would degrade it. The pursuit of quackery is not its proper function, but the duty of the state. The profession should be so licensed and regulated that the very fact of ability to practice would be a guaranty of competence and integrity.

"The profession has no superior body like the courts to aid it in self-purification by a process like disbarment. It cannot undertake self-censorship without evoking the merely human sentiments of jealousy, envy of success and bare personal dislike to corrupt its evidence and pervert its judgments. It should be purified from without and above."

After discussing German methods for securing efficiency, and the effect of economic pressure on the reputable physician, the editor continues:

"The neglect of the state has degraded the highest service to humanity to a struggle for existence. They have families to support, like the rest of us. The fittest to survive will get patients, by Nature's rude standard of strength and persistence in pursuit, as often as by the more refined standard of science.

"High-minded doctors so compelled do penance by unselfish service to humanity. They give more of the free service to the poor than the rare masters who can pick and choose patients. They draw sustenance from them who have it to spare, and perhaps save them from worse things. The doctor habit is ineradicable. It is something for those who can afford it to indulge it without suffering real harm.

"Of course every sham bears fruit of evil, at some degree of distance. Probably this harmless humbug has done more than anything else to breed in the American public that distrust of the highest achievements of science in surgery and vital chemistry we find in men who should know better.

"Gibes at mining for gold in the human abdomen and at leg-pulling to pension surplus doctors in original research laboratories are not heard in countries that protect science from the temptation and opportunity for money chasing.

"It is the state that exposes its noblest servants to inevitable debasement of service by fostering illegitimate competition that makes illegitimate gain for some the pure alternative of starvation."

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

Eighth Month—Fourth Weekly Meeting

ACUTE ILEOCOLITIS

ETIOLOGY: Age, season, diet, etc. Secondary to infection. Bacteriology: Researches of Booker, Shiga, Flexner.

PATHOLOGY:[1] Gross and microscopic changes in following forms, viz., acute catarrhal, catarrhal ulceration, follicular ulceration, acute membranous.

ASSOCIATED PATHOLOGY: Bronchopneumonia, bronchitis, nephritic changes.

SYMPTOMS

CATARRHAL: Cases of moderate severity, sudden onset, vomiting, pain, fever, diarrhea. Characteristic discharges later, blood and mucus, tenesmus. Usual course and duration. Tendency to relapse.

1 Archives of Pediatrics, November, 1903.

SEVERE CATARRHAL FORM: Symptoms more marked, high fever, frequently bloody stools, prostration, nervous symptoms, toxic symptoms, usual terminations. Gradual recovery, slow convalescence.

FOLLICULAR ULCERATION: Usually a terminal process of gastro-enteric infection. Sudden or gradual onset. Continued temperature, mucus in discharges, little blood, slight vomiting, loss of weight. Tendency to remissions and relapses. Slow recovery and convalescence.

MEMBRANOUS: Severe onset, high fever, vomiting, large bloody stools, prostration, nervous symptoms. Pain, rectal prolapse, tenesmus. Characteristic shreds of pseudomembrane. Usual termination, influence of age.

TREATMENT:[2] Diet. Medicinal. Local.

CHRONIC ILECOLITIS

SYMPTOMS: Differentiation between acute and chronic stages. Absence of pain, tenderness and temperature. General condition, loss of weight progressive, loss of superficial fat, condition of skin. Stomatitis, gastric disturbance slight. Stools: number, character. Nervous symptoms. Course and duration, tendency to relapses.

DIAGNOSIS: Differentiate superficial catarrhal inflammation from follicular ulceration. Differentiate from general tuberculosis.

Monthly Meeting

The Principles of Artificial Feeding of Infants.[3]
Treatment of Acute Entercolitis.
Relation of Gastro-Intestinal Diseases to Infant Mortality.

REFERENCE BOOKS FOR THE EIGHTH MONTH

Holt: Diseases of Infancy and Childhood.
Rotch: Pediatrics.
Koplik: Diseases of Infancy and Childhood.
Starr: American Text-Book of Diseases of Children.
Chapin and Pisek: Diseases of Children.
Taylor and Wells: Diseases of Children.
Pfaundler and Schlossman: Diseases of Children.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARKANSAS: Regular, Little Rock, May 14. Sec., Dr. F. T. Murphy, Brinkley.

FLORIDA: Regular, Jacksonville, May 7-8. Sec., Dr. J. D. Fernandez; Eclectic, Jacksonville, May 6-8. Sec., Dr. Hiram J. Hampton, Tampa.

GEORGIA: Homeopathic, Atlanta, May 8. Sec., Dr. R. E. Hinman, 106½ Whitehall Street, Atlanta.

ILLINOIS: Coliseum Annex, Chicago, April 30. Sec., Dr. James A. Egan, Springfield.

LOUISIANA: Regular, Tulane University, New Orleans, May 30 to June 1. Sec., Dr. A. B. Brown, 108 Baronne Street; Homeopathic, New Orleans, May 6. Sec., Dr. Edward Harper, 702 Macheca Bldg.

MASSACHUSETTS: State House, Boston, May 14-16. Sec., Dr. Edwin B. Harvey, State House.

MISSISSIPPI: State Capitol, Jackson, May 14. Sec., Dr. W. W. Smithson.

NEBRASKA: Senate Chamber, State House, Lincoln, May 22-23. Sec., Dr. C. P. Fall, Beatrice.

NEVADA: Carson City, May 6. Sec., Dr. S. L. Lee.

NEW YORK: May 14-17. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

TENNESSEE: Memphis, Nashville and Knoxville, May 1-2. Sec., C. A. Abernathy, Pulaski.

WISCONSIN: Milwaukee, May 28-30. Sec., Dr. J. M. Beffel, 3200 Clybourn Street.

Medical School Wins Suit

The University of Nebraska College of Medicine is now in position to make use of the $100,000 appropriated by the legis-

2. Kerley: New York Medical Journal, June 6, 1903. Nicoll: International Clinics, vol. ii, Thirteenth Series. Progressive Medicine, March, 1907. THE JOURNAL A. M. A., Sept. 28, 1907.

3. Chapin: Archives of Pediatrics, July, 1903, and August, 1904. Rotch: THE JOURNAL A. M. A., Aug. 15, 1903. Pisek: Medical Record, Sept. 9, 1905. Southworth: THE JOURNAL A. M. A., Oct. 6, 1906. Southworth: Archives of Pediatrics, February, 1907, and October, 1907. Archives of Pediatrics, March, 1908. Chapin: THE JOURNAL A. M. A., Sept. 18, 1909.

lature for the erection of new medical buildings in Omaha. The Supreme Court of Nebraska has refused to confirm an injunction granted in the court of Lancaster County. The objections stated in the suit for injunction were that the appropriation was special legislation providing state aid for a particular school of medicine and that the erection of university buildings in Omaha was in conflict with a law passed in 1869 providing that all buildings of the state university should be located within four miles of the state capitol. In reply to the first of these objections, according to report, the Supreme Court replied there was nothing in the bill which specified what kind of instruction was to be given. To the second the answer was that the act of 1869 does not prevent the legislature from providing later by subsequent acts that certain buildings should be located elsewhere, as was clearly done in this case. Hence the way is now clear for the University of Nebraska to proceed with the development of its medical school in Omaha.

Nebraska February Report

Dr. C. P. Fall, secretary of the Nebraska State Board of Health, reports the written examination held at Lincoln, Feb. 14-15, 1912. The number of subjects examined in was 10; total number of questions asked, 100; percentages required to pass, 75. The total number of candidates examined was 9 of whom 7 passed and 2 failed. Five candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Georgetown University	(1906)	79.7
Northwestern University Medical School	(1910)	84.5
Hahnemann Medical College and Hospital, Chicago	(1911)	81.7
Rush Medical College	(1911)	83.4
St. Louis University	(1911)	78.5
Creighton Medical College	(1911)	81.5, 81.7

FAILED

St. Louis College of Physicians and Surgeons	(1911)	72.1
Ensworth Medical College	(1909)	68.2

LICENSED THROUGH RECIPROCITY

College.	Year Grad.	Reciprocity with
Atlanta College of Physicians and Surgeons	(1901)	Iowa
Northwestern University Medical School	(1904)	Iowa
State University of Iowa, College of Medicine	(1904)	Iowa
Western Eclectic College of Med. and Surgery	(1907)	Kansas
Louisville Medical College	(1905)	Kentucky

Wisconsin January Report

Dr. John M. Beffel, secretary of the Wisconsin State Board of Medical Examiners, reports the written and oral examination held at Milwaukee, Jan. 9-11, 1912. The number of subjects examined in was 20; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 22 of whom 9 passed and 13 failed, including 1 osteopath. Twenty-two candidates were licensed through reciprocity, including 6 osteopaths. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Rush Medical College	(1910)	85
Northwestern University Med. School	(1909) 84; (1911)	79
Eclectic Medical Institute, Cincinnati	(1888)	75
University of Pennsylvania	(1909) 84; (1911)	82
Woman's Medical College of Pennsylvania	(1910)	81
University of Christiania, Norway	(1910)	82
National University, Athens, Greece	(1903)	81

FAILED

Northwestern University	(1910)	*75
Bennett Med. College	(1911) 63, 64, 64, 66, 69, 72; (1912)	55
Sioux City College of Medicine	(1906)	57
University of Louisville	(1911)	57
Marquette University, Milwaukee	(1910) 57; (1911)	69

LICENSED THROUGH RECIPROCITY

College.	Year Grad.	Reciprocity with
Northwestern Univ. Med. School	(1880) (1905) (1910)	Illinois
Hahnemann Med. College and Hospital, Chicago	(1910)	Illinois
Illinois Medical College	(1900)	Illinois
College of Physicians and Surgeons, Chicago (1911) Illinois.	(1903)	North Dakota;
Atlantic Medical College	(1910)	Maryland
University of Michigan, Dept. of Med. and Surg.	(1909)	Michigan
University of Minnesota College of Med.	(1890) (1909)	Minnesota
University of Minnesota, Homeopathic College	(1903)	Minnesota
Kansas City Hahnemann Medical College	(1910)	Arkansas
University Medical College, Kansas City	(1904)	Oklahoma
Syracuse University	(1908)	Minnesota
University of Pennsylvania	(1910)	Maryland

* Conditioned in pathology.

Book Notices

THE MECHANICAL FACTORS OF DIGESTION. By Walter B. Cannon, A.M., M.D., George Higginson Professor of Physiology, Harvard University. Cloth. Price, $3 net. Pp. 227, with 37 illustrations. New York: Longmans, Green & Co., 1911.

The progress of gastro-enterology is shown by an increasing emphasis on the mechanical factors in digestion and on motor disorders rather than disorders of secretion. Our knowledge of the latter was placed on a sure basis by the investigation of Pawlow; it remained for an American physiologist to apply the experimental method made possible by discovery of the Roentgen ray to the motions of the stomach and intestines. The fruits of fifteen years of research on this problem are summed up by Professor Cannon in the book before us. They constitute a body of facts from which a clear idea of the nice adjustments and complicated movements by which food is propelled along the digestive canal is obtained. The basis of the book is the method of examining the progress of food mixed with a salt of bismuth (with the fluoroscope) through the stomach and intestine. The adaptation of movement to the character of the food is as remarkable as the adaptation of secretion shown by the experiments of Pawlow. Carbohydrates needing no stomach digestion leave the stomach quickly, while proteins like meat are retained for more complete preparation for intestinal digestion. Fats, on the other hand, by checking the formation of hydrochloric acid, delay the opening of the pylorus, and are therefore discharged slowly and at a rate such as to prevent a great accumulation of the fat in the duodenum, where it is mixed with its special digestive secretion. The movements of the intestine furnish a chapter as absorbing in interest as those dealing with the movements of the stomach. The process of defecation and its innervation is described; the investigations throw some light on the nature of constipation and may afford some valuable suggestions as to the treatment of that condition. Two very interesting chapters are devoted to the innervation of the intestinal canal. Another is occupied with the description of the results of the author's investigations of the sounds elicited by auscultation of the abdomen. So far, these investigations have been made on normal individuals only; it remains for clinicians to pursue the subject further. Perhaps a fertile field of diagnosis may thus be developed. The importance of this monograph is not to be estimated by its size, but it is one which every medical practitioner can well afford to make his own, not only as a part of his library, but as a foundation for his further studies and practice.

TRUTH'S CAUTIONARY LIST FOR 1912. Cloth. Price, 1 shilling, 2 pence (post-paid, 30 cents). Pp. 146. London: Truth Publishing Co., Ltd., 10 Bolt Court, Fleet Street, E. C.

The readers of THE JOURNAL need no introduction to London *Truth*. Time and again reference has been made to the exposures which this great English weekly has made of medical frauds that are flourishing in Great Britain. Not that *Truth* confines its campaign against fraud to those of a medical nature. Frauds of any kind, swindlers in any line of endeavor, humbugs in any capacity are ruthlessly exposed: The result is that at the end of each year *Truth* has accumulated a large amount of information concerning fakes of all kinds that is of vital interest to the public. In order to put this material in easily accessible form, it is boiled down into terse paragraphs, classified, indexed and cross-indexed and issued in a small annual volume known as "Truth's Cautionary List." The 1912 edition is now before us. To indicate briefly the scope of this work, it is but necessary to quote the headings of a few of the twenty and more chapters making up the book. These comprise such subjects as "Begging-Letter Writers," "Medical Quacks," "Bucket-Shops," "Money Lenders and Their Touts," "Trick Advertising," "Biography, Journalism and Advertising" and many others.

The chapter dealing with "Miscellaneous Practitioners" is, next to that dealing with medical quacks, of special interest, there being described several frauds that are indigenous to the United States. But it is in the chapter devoted to "Quacks" that one realizes what the more stringent laws and rigid post-

V. 58 1912

office rulings in the United States have done for British quackery. There are sixty-six different medical fakes listed in this chapter. Of this number, more than one-half are of American origin. This means, as has been repeatedly stated in THE JOURNAL, that American quacks and nostrum venders, finding the home market less favorable to their business, have opened branches in Great Britain where restrictive laws are conspicuous by their absence.

To sum up: "Truth's Cautionary List" is the encyclopedia of fakes *par excellence*. While published by a British firm and particularly for British readers, it is a book that any American can read with interest and instruction; this not only because many of the frauds described have their headquarters in America, but also because there are many swindlers dealt with which, while in themselves English, are identical in their *modus operandi* with frauds conducted in this country.

A MANUAL OF MATERIA MEDICA FOR MEDICAL STUDENTS. By F. Quin Thornton, M.D., Assistant Professor of Materia Medica in the Jefferson Medical College, Philadelphia. Cloth. Price, $3.50 net. Pp. 525. Philadelphia: Lea & Febiger, 1911.

As indicated by the title, this is a manual of materia medica. The allied subjects of pharmacology and therapeutics are almost wholly ignored, the subject of materia medica being regarded as a preliminary one which is to serve as a foundation for the course in therapeutics. As, at the period when the student is supposed to undertake the study of materia medica, he is not far enough advanced in physiology to understand the normal actions of the organism, the physiologic action of drugs is omitted to a large extent, only the simpler actions being described in order that the study may not become too dry. There may be some room for doubt whether this is really the best way to teach materia medica, since it thus becomes almost a pure matter of memory and of detail without close application to the ultimate object of the physician's studies, viz., therapeutics.

Much attention is given to the theory of prescription-writing and especially to Latin. More than a score of pages are devoted to a summary of Latin grammar. Let us hope that these statements which are given without illustrations or exercises may be of benefit, but it seems a strange commentary on the preparation of our medical students that not only must teachers in medical schools teach the Latin of prescription-writing, but also the pages of medical text-books must be encumbered with the details of Latin grammar.

A rather extensive discussion of the administration of medicines is given, but nothing is said of intravenous administration. This already established method of administering remedies seems deserving of an extended notice in an up-to-date text-book.

In the body of the book official substances and preparations are described. The descriptions are clear and concise. An appendix gives a list of all official preparations with their dose in both the ordinary and the metric system.

ORTHOPEDIC SURGERY. By Edward H. Bradford, M.D., Surgeon to the Boston Children's Hospital, and Robert W. Lovett, M.D., Associate Surgeon to the Boston Children's Hospital. Cloth. Price, $3.50 net. Pp. 410, with 364 illustrations. New York: William Wood & Co., 1911.

This book is a condensation of the third edition of the treatise on orthopedic surgery, by the same authors, issued seven years ago, the present edition being about two-thirds the size of the third edition. Some sections are partly rewritten, as the sections on arthritis deformans and on lateral curvature, but the outline and, in the main, the text of the book are unchanged, except for the omissions. The work of these authors has long been standard, and in this smaller volume will be more available.

CASE HISTORIES IN MEDICINE, ILLUSTRATING THE DIAGNOSIS, PROGNOSIS AND TREATMENT OF DISEASE. By Richard C. Cabot, M.D. Second Edition. Cloth. Price, $3. Pp. 295. Boston: W. M. Leonard, 1911.

Cabot here presents the histories of a series of cases, selected to illustrate difficulties which confront the physician at the bedside. This second edition includes one hundred cases, which are arranged in groups, such as infectious diseases, diseases of the heart, the nervous system, the ductless glands, etc. The history of each case is stated as it was obtained from the patient, and the physical and laboratory findings, so far as they were available, are given. It frequently happens that the crucial laboratory examination is lacking, or the history is misleading, and as a result the correct diagnosis cannot be made. Cabot discusses these possibilities, and after supplying the necessary data arrives at the diagnosis and prognosis and outlines the treatment. He makes good use of the opportunity to teach rational therapy, and while we may not always agree with him in the acceptance or discarding of certain drugs, we believe that the discussions here presented will do much toward the prevention of indiscriminate drugging, on the one hand, and therapeutic nihilism on the other. The book is in no sense a text-book, but rather a volume of short stories in medicine, in which general diagnostic and therapeutic principles are considered in their relation to the individual case.

LEHRBUCH KLINISCHER UNTERSUCHUNGSMETHODEN FÜR STUDIERENDE UND AERZTE. Von Dr. Theodor Brugsch, Universitätsprofessor, und Dr. Alfr. Schittenhelm, Professor der klinischen Propaedeutik und Geschichte der Medizin in Erlangen. Second Edition. Paper. Price, $4.25. Pp. 712, with 341 illustrations. New York: Rebman Co., 1911.

This is the second edition of this work, the first having appeared three years ago. Many chapters have been entirely rewritten; an indication of the great changes which have taken place since the first edition is the fact that in some of the chapters not a sentence of the previous edition remains. In order not to have this volume too large the authors have eliminated from it those methods of examination which require specially equipped laboratories and experts to carry out, and those highly technical methods are to form a second volume which will appear the end of this year.

In the present volume will be found practically everything relating to clinical methods of examination. What should be found normally is first described, then the deviations from the normal and finally the significance of the abnormal. The latter is a very important feature of the work and one which is too frequently slighted in works of this kind. For instance, it is not sufficient to know how to detect a lymphocytosis in the blood; it is also necessary to know what its significance is when found.

'THE LUTE OF LIFE. By James Newton Matthews. Edited by Walter Hurt. Cloth. Price, $1.50. Pp. 348. Cincinnati: Horton & Co., Publishers, 1911.

This book consists of a collection of the poems written by the late Dr. James Newton Matthews, with a foreword by James Whitcomb Riley, Matthews' close personal friend.

Dr. Matthews was the son of one of the prominent early medical men of Illinois and was himself a busy country practitioner up to his death, in 1910, subsequent to long and exhausting rides over country roads, caring for the sick. His poems breathe of the country and the sky, the woods and the flowers, of rivers and prairies. They also bear witness to a deep insight into and sympathy with human feelings and suffering, such as comes from the experience of a general practitioner of medicine. Some of the poems have direct medical interest, and all will appeal to those who care for the finer things in literature. The merit in Dr. Matthews' writings has been appreciated by the literary world, and this collection of poems should find a place in the library of every doctor.

It may also be a satisfaction to purchasers of this book to know that aid is being extended to the widow of a doctor who, like many another, was too busy caring for the sick to make adequate provision for those he loved the most.

HYMN TO HYGIEA. English and German Text. Words and Music by John C. Hemmeter, M.D., Phil.D., LL.D., Professor of Physiology, University of Maryland, Baltimore. Dedicated to Prof. William Henry Welch of the Johns Hopkins University. Paper. Price for Score, $1 net. New York: Carl Fischer, 1911.

This hymn, with both English and German text, is a serious production for solo work with chorus. It is a well-arranged, dignified hymn, worthy of production. Medical men ought to do more of this sort of work, not only in composition, but in rendition.

Medicolegal

Liability for Malpractice of Furnisher of Gratuitous Medical Treatment

(Ballard vs. Chesapeake & Ohio Railway Co. (Ky.), 139 S. W. R. 771)

The Court of Appeals of Kentucky affirms a judgment in favor of the defendant railway company, which was sued for malpractice after the plaintiff had been treated gratuitously by a physician in its employ. A foot of the plaintiff's had been crushed at a time when, the evidence gave the impression, it was his purpose to steal a ride on a moving train. However, whether he was trespassing or not was not material, as he based his case entirely on the ground that the company was responsible for the malpractice of the physician employed by it, who by its direction rendered to him the gratuitous service. If an action for malpractice had been brought against the physician, there was evidence sufficient, the court says, to take the case to the jury; but, as it was sought to hold the company liable, an entirely different question was presented.

In cases like this the settled rule is that the person or company employing a physician, who by its direction renders gratuitous service, is not liable for his specific acts of negligence or malpractice, if reasonable care in his selection was exercised to secure the services of a competent and skilful physician, unless, after his incompetency or unfitness becomes known, or in the exercise of reasonable care should have been known, he is retained. Therefore, before liability attaches to the person furnishing a physician to render gratuitous service, there must be some evidence showing the existence of two things: First, negligence or malpractice on the part of the physician in the treatment of the case under his control; and, second, that the person furnishing the physician failed to exercise reasonable care to select a competent and skilful physician, or after he knew, or could by the exercise of reasonable care have known, of his unfitness or incompetency, retained him. If there is a failure of proof on either of these propositions, the person seeking a recovery of damages against the person furnishing the physician must fail.

It was argued that the rule of law stated is only applicable to employers who, being under a duty to do so, furnish medical assistance to injured employees, and should not be extended to embrace a case like this, in which there was no duty to furnish medical attention. But it seems to the court that there is less reason for holding a person who voluntarily and gratuitously, and without being under any duty to do so, responsible for the negligence or malpractice of a physician secured by him to give treatment to an injured person than there would be when the person furnishing the physician was under a duty to do so.

Liability for Giving of Free Samples of Medicine to Children in Violation of Statute

(State vs. Cray (Vt.), 81 Atl. R. 450)

The Supreme Court of Vermont affirms a judgment of conviction of violating the statute of that state which provides that "a person, firm or corporation that distributes or causes to be distributed a free or trial sample of a medicine, drug, chemical or chemical compound, by leaving the same exposed on the ground, sidewalks, porch, doorway, letter box, or in any other manner, that children may become possessed of the same, shall be fined," etc. In this case a free sample of kidney and bladder pills was given to a child 4 years old. It was not done by the defendant in person, but the court holds that, notwithstanding the distribution was by his agent, and contrary to his general instruction against delivering to children, yet, as it was done by the agent in distributing samples furnished him by the defendant for that purpose, acting under the defendant's orders, and in the prosecution of the defendant's business, for which he was employed, the distribution was caused by the defendant within the meaning of the statute, and he was answerable therefor. The court says that the statute quoted is in exercise of the police power, for the general protection by the state, as parens patriæ (parent of the country), of children within its domain; they being incapable of protecting themselves. It pertains to their physical well-being, and hence to the interest of the state. The action given for its violation, though criminal in form, is in substance more particularly civil in nature, designed to prevent the recurrence of that which constitutes a public nuisance. The statute looks at and punishes the act constituting the offense, without regard to the intention of the person by or for whom the distribution is made. A person may lawfully distribute such articles as are named in the statute, if he observes its provisions. If he employs an agent for that purpose, it is his duty to know that the law regulating the manner of distribution is not violated.

Liability for Negligence of Driver of Hospital Ambulance

(Kellogg vs. Church Charity Foundation of Long Island (N. Y.), 96 N. E. R. 406)

The Court of Appeals of New York reverses a judgment which held the defendant liable for damages for injuries sustained by the plaintiff through the alleged negligence of a driver of an ambulance of the hospital maintained by the defendant, a charitable corporation. The court says that it must now be regarded as settled that a charitable corporation is not exempt from liability for a tort or wrongful act against a stranger, because of the fact that it holds its property in trust to be applied to purposes of charity. But the court does not consider that the defendant was liable in this instance for the negligence of the driver, the ambulance, though owned by the defendant and bearing the name of its hospital, being kept at a livery stable, the proprietor of which furnished a horse to draw the ambulance and a man to drive it on such occasions as the defendant might indicate, the driver being hired and paid by the livery stable keeper, who alone had the power to discharge him. The case was analogous to the hiring of a team with a driver from a liveryman, where the liveryman remains liable for any injury to third persons due to the negligence of the driver, notwithstanding the fact that the person hiring the team may direct the driver where to go and at what speed. Such a contract does not make the driver the servant of the hirer, or render his negligence imputable to the latter. Nor does the court agree with the contention that the defendant was rendered liable because ordinances had been passed permitting ambulances to travel along the streets at a rate of speed prohibited in respect to other vehicles. The ordinance specially relied on in no manner authorized the driving of such vehicles at a dangerous rate of speed. It did not prescribe a high rate of speed, or any rate whatever, but was merely equivalent to a command or direction that other vehicles should give way to ambulances in the public streets. There was no foundation, therefore, for the doctrine that an ambulance was necessarily a dangerous instrumentality.

Communication of Gonorrhea Not an Indictable Offense

(Austin vs. State (Miss.), 56 So. R. 345)

The Supreme Court of Mississippi reverses a judgment of conviction for spreading a contagious disease, with instructions that the case be dismissed. The indictment was framed under section 1085 of the Mississippi Code of 1906, which makes it a punishable offense if any person shall wilfully and knowingly import or bring into the state, or into any county thereof from another county, small-pox, or any other contagious or infectious disease or matter thereof, with the design to spread the same by inoculation or otherwise, or shall inoculate, or procure inoculation, for said diseases, or any or either of them, after the disease may have been introduced, except as provided by law. The court holds that the indictment charged no offense known to the law in charging that the defendant had and induced in the county, and wilfully, knowingly and unlawfully inoculated a named minor with an infectious disease, known as gonorrhea, by having and causing sexual intercourse with him, and thereby causing him to contract and have the disease.

V. 58
1912

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 4-7.

Alabama State Medical Association, Birmingham, April 16.
American Academy of Medicine, Atlantic City, May 30-June 2.
American Dermatological Association, St. Louis, May 23-25.
American Gynecological Society, Baltimore, May 28-30.
American Laryngological Association, Atlantic City, May 9-11.
American Medico-Psychological Association, Atlantic City, May 28-31.
American Neurological Association, Boston, May 30-June 1.
American Orthopedic Association, Atlantic City, May 30-June 1.
American Pediatric Society, Hot Springs, Va., May 29-31.
American Surgical Association, Montreal, May 29-31.
American Therapeutic Society, Montreal, May 31-June 1.
Arizona Medical Association, Bisbee, May 7.
Arkansas Medical Society, Hot Springs, May 13-16.
Association of American Physicians, Atlantic City, May 7-8.
California State Medical Society, Del Monte, April 16-18.
Connecticut State Medical Society, New Haven, May 22.
Florida Medical Association, Tampa, May 8-10.
Georgia Medical Association, Augusta, April 17-19.
Illinois State Medical Society, Springfield, May 21-23.
Iowa State Medical Society, Burlington, May 8-10.
Louisiana State Medical Society, New Orleans, April 23-25.
Maryland Medical and Chirurgical Faculty, Baltimore, April 23-25.
Montana State Medical Association, Helena, May 8.
Nat. Assn. for Study and Prev. Tuberculosis, Washington, May 30-31.
Nebraska State Medical Association, Lincoln, May 7-9.
New Hampshire Medical Society, Concord, May 8-9.
New York State Medical Society, Albany, April 16-18.
North Dakota State Medical Association, Valley City, May 8-9.
Ohio State Medical Association, Dayton, May 7-9.
Oklahoma State Medical Association, Shawnee, May 7-9.
South Carolina Medical Association, Columbia, April 16-18.
South Dakota State Medical Association, Mitchell, May 22-24.
Texas State Medical Association, Waco, May 7-9.
Wisconsin State Medical Society, Wausau, May 22-24.

NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS

Twenty-Second Annual Meeting, held at Chicago, Feb. 29, 1912

DR. CHARLES A. TUTTLE, New Haven, Conn., in the Chair

Officers

The following officers were elected: president, Dr. A. B. Brown, New Orleans; vice-presidents, Dr. Charles H. Cook, Natick, Mass., and Dr. Pearl Tatman, Arkansas; secretary-treasurer, Dr. George H. Matson, Columbus, O.

What a National Confederation of State Boards Can Do

DR. A. B. BROWN, New Orleans, La.: One of the main purposes for the creation of state boards of medical examiners has been to make it the duty of certain state functionaries, competent to perform that duty, to see that the violators of the laws in regard to the qualification of physicians were punished. Through cooperation a national federation of state boards could, by the interchange of information concerning the prosecution of violators of the medical laws, prevent those violators from continuing the violation by the mere change of location from one state to another. A uniform requirement of the qualifications for the practice of medicine would result in a uniform exclusion of unqualified persons. A national federation can speak with a much louder voice and higher authority than any one local board. Legislators would be more likely to listen to a demand of so universal a character, and which would be deprived of all appearance of individual interest, than they would to the request of a few physicians constituting the local board. In this way uniformity of legislation might be obtained from the different states defining what constitutes the practice of medicine, naming the character of examinations to be held and giving the remedies for the violation of the statute. As it stands to-day each one of the forty-seven states of the Union seems to have a different definition of the practice of medicine. While the courts have, as a general rule, construed them as prohibiting, in general terms, the treatment of disease through any means whatsoever by unqualified persons, yet these definitions have served as excuses for a few courts to distinguish between the different methods of curing people, so as to allow unqualified persons to practice the healing art.

One of the powers of such a federation would be to fix, and raise, perhaps, the standard of examination to which the several state boards should adhere in passing on the qualifications of applicants for the practice of medicine. At present these examinations are not uniform. When we realize that not only the methods of examining, but the subjects for examination and the thoroughness of detail with which the examination is held, are different in different states, it is easy to see how unsatisfactory in one state a certificate issued by a board of medical examiners from another state might be.

DISCUSSION

DR. LEE H. SMITH, Buffalo, N. Y.: In the State of New York we have depended on the Regent's office for the enforcement of all details as regards entrance examination, bringing all recalcitrant practitioners before the board for proper adjudication, as it were, of their improper methods. The medical examining board is called on only as a final penalizing organization.

DR. W. T. GOTT, Indianapolis: In order to establish uniformity in the matter of medical qualifications and to enlarge the scope of the medical license, it is necessary to establish some sort of rule or regulation by somebody, some organization, looking toward the uniformity of medical licensure. A national body is the one which should undertake such work. If the states would adopt the uniform recommendations of the national body and establish reciprocity along such lines, all states would almost be compelled in time to adopt the same standard in order that their licentiates might be able to practice anywhere in the United States instead of in a single state.

Methods That May Be Used in Conducting Licensing Examinations

DR. GEORGE H. MATSON, Columbus, O.: State examinations of a practical nature are now necessary and must continue until poor schools cease to exist. The term "practical" is used as implying laboratory and clinical demonstrations as well as oral and written work. An examination should consist of written discussions on subjects in practice and therapeutics; oral and written work in anatomy, physiology and obstetrics, with laboratory material and the manikin; practical demonstrations in minor surgery both on the living subject and the cadaver; laboratory and written work in histology, pathology, bacteriology and chemistry, and actual clinical demonstrations with diseased patients in diagnosis. Since the medical board is the only barrier between the public, which needs protection on one side, and the applicant, backed by his college on the other, members of medical boards should be selected or appointed, not for political reasons, but for their peculiar fitness. Funds for the employment of competent assistants should be made available.

An examination of the various state medical practice acts reveals the fact that in a very large majority of states the boards have the regulating power and the adoption of methods for examination lies entirely in their hands. Nine states have undertaken these rational methods. Practical examinations in Minnesota have been a decided success. The Ohio board has been well pleased with the results since their inauguration in 1908. Not one member would return to the old method. Six other boards have expressed their intention of adopting practical tests. The outlook is good.

DISCUSSION

DR. CHARLES H. COOK, Natick, Mass.: There are states that cannot conduct practical examinations to any degree until they change their laws, because they require examinations to be written. In Massachusetts we are obliged to examine everybody who applies. The examination is required to be sufficient to test the qualifications of the applicant to practice medicine, so that we are not compelled to give those who come from other states a complete examination. We can register a man quickly if we find he is competent.

DR. WALTER P. BOWERS, Clinton, Mass.: Practical examinations are now recognized as a vital part of the work of state boards. We are tremendously handicapped in that none of us have at our disposal the amount of money necessary to carry

on this work. The only solution of this problem is to secure the cooperation of the medical schools and the hospitals, and this cooperation can be secured without any great expense.

DR. B. D. HARISON, Detroit, Mich.: In the case of a distinguished practitioner of medicine, we would not have to ask him any question. He could obtain a license without taking an examination. Our law permits us to register men of that character and standing without any examination whatever, or without even their appearance before the board.

DR. WARREN B. HILL, Milwaukee, Wis.: If we could have practical examinations it would be the greatest stimulus to the medical colleges to do good work, and it would promote a helpful spirit between the college and the state board—a spirit of cooperation that would tend to better practical medical education. In our school we have practical examinations all along the line. We have practical examinations in internal medicine for final examination, but no doubt if these same students came before another examining board we would find, perhaps, that there were flaws in our system of practical education. It might be found that we were emphasizing one part of the curriculum to the disadvantage of another, and by the practical tests we can very soon find out wherein we are weak in our teaching arrangements, and with the cooperation of the state board, provided the board would cooperate with us, we could find out our weaknesses and much could be done by means of this cooperation to strengthen in detail the general work of the medical college.

DR. J. W. COBB, U. S. P. H. and M.-H. S.: State examining boards, as they are now constituted, must comply with the state laws, but if you can have a body like this, whose object is good, its action will in itself be a law. Everybody will be glad to comply with the regulations of this body. There is one other point about state laws: too many state laws specify as to what the examination should be, and how it shall be conducted, and there is where this body would be confronted by a hard problem. A state law should be passed giving the examining board the power to make regulations for the conduct of these examinations. If a state board can make its own rules and regulations for examinations, that state board can join with you.

DR. W. A. SPURGEON, Muncie, Ind.: We are striving for a degree of perfection that it will take a long time to reach. The real important function of an examination is, first, to determine the qualifications of the applicant to practice medicine; second, to determine the educational value of the institution from which the applicant came. These two things are the heart and soul of the essential functions of the medical examination. A practical examination can only be approximated. You cannot get the time, and you have not the facilities to make a practical examination, except that it will of necessity be crippled by inefficiency or it will be too superficial. This much can be done by a practical examination: it can be used as a means of supplementing the written examination.

DR. W. ED. GRANT, Louisville: The principal thing in all state board examinations is to find out whether the applicants for licenses know how to practice medicine, and practical examinations will aid in determining this very materially.

DR. HERBERT HARLAN, Baltimore: Our state laws will not allow many of us to hold these practical examinations, though it would be very desirable to have them.

DR. WILLIAM F. SNOW, Sacramento, Cal.: The practical examination is a most vital thing in connection with state board examinations. Some of us have advocated these examinations in California, but we have been told by members of the board of examiners they have no facilities for conducting them. It seems to me, it is a question of appropriation and modification of the law, and I think every legislature is willing to consider modifications of any law.

What Should Be the Requirements for Membership in a National Confederation of State Boards?

DR. JOHN M. DODSON, Chicago: The object of such an organization should be, first, to unify the laws and pave the way for reciprocity; second, to improve the methods of examination by providing practical tests. I have no patience with those who think practical tests are not feasible, and hold that written examinations stand in the way of progress. The membership might be active, including only state boards with high standards; associate membership of state boards with low standards, and affiliated membership, which includes all those interested in medical education.

DR. N. P. COLWELL, Chicago, outlined what should be required by the laws and the boards in each state. He urged reasonable requirements, so that the country generally might be represented in the new federation. He thinks that where the laws are bad, and the boards good, there is every hope of a favorable outcome. If the boards take the proper methods of safeguarding the public that is what is needed.

PHILADELPHIA ACADEMY OF NATURAL SCIENCES

Centenary Meeting, held March 19-21, 1912

In a three-day meeting covering a long program of scientific and other papers and addresses, the Academy of Natural Sciences of Philadelphia celebrated the centennial of its foundation, March 19, 20 and 21.

Historical Statement

The academy was organized March 21, 1812. The title of the new organization was suggested by Dr. Samuel Jackson of the University of Pennsylvania, but he did not associate himself with it on account of religious and social prejudices against the study of the natural sciences in those days, which he feared would militate against his success as a rising young practitioner. However, the academy had the earnest support of medical men and drew into its membership those who were connected with the University of Pennsylvania and the American Philosophical Society. This support of the medical profession has continued and the president, in its centennial year, is Dr. Samuel G. Dixon, Commissioner of Health of Pennsylvania, which position he has occupied since 1895. Under him the academy has made much progress and at present has almost completed new buildings at Nineteenth and Race streets, which will house one of the greatest scientific museums in the world, being equaled by only one or two others in Europe and America. The library of the academy is also one of the most valuable scientific libraries to be found anywhere.

The meeting culminated in a banquet on Thursday evening, at which Mayor Blankenburg addressed the scientists, largely concerning matters of interest to Philadelphia, calling attention to the new city library which is to be erected on the park-way opposite the new buildings of the Academy of Science and suggesting that the Philadelphia library, which is to be one of the greatest in the country, should not duplicate the great library of the academy, nor the other important reference libraries of the city. He also said that science should be applied to municipal government and the effort was being made in the Quaker City to make that application. He said that if we had honest and scientific municipal administration in all the cities of our country, the future of the nation would be assured.

President Dixon's Address on Prophylaxis

The president, Dr. Dixon, spoke at the banquet on the importance of scientific investigation in securing health to the community through prevention.

In the address delivered Tuesday evening, in his general review of the work of the academy and of the men who have made its name famous, Dr. Dixon pointed out that from the very first the earnest lovers of science who were its founders had mapped out the lines of work which practically were the basis of the methods which the academy had pursued in work for a full century, exploration, the securing of collections, laboratory work with study collections, the building up of a library, and the exchanging of publications with other learned societies, which brought the academy in reciprocal touch with

V. 58
1912

the whole world of science without its walls. More than most people imagined the academy has been connected with a long line of explorations which began with the early expeditions to the Rocky Mountains and the far west, in which Thomas Say, one of the founders, took a prominent part as a member of the Long expedition to the Rocky Mountains in 1820; and in view of the interest in Antarctic research and of the discovery of the Antarctic pole, Dr. Dixon noted that two members of the academy, at the request of the United States Government, accompanied the Wilks expedition in 1838; while it is fresh in the minds of most people not only how the first Peary expedition and the Peary relief expedition of 1891-1892 were financed by the academy, although only academy members know that the famous Dr. Elisha Kent Kane was supplied with scientific outfit by the academy in 1853 for his Arctic trip, which for many years eclipsed all other experiences in the Arctics and gave Kane an imperishable fame. The further winning of the West through the Hayden expeditions, the scientific opening up of Africa by du Chaillu, and the work of the pioneers, Rogers and Leslie, in the Pennsylvania Geological Survey, Dr. Dixon mentioned as examples of explorations near and far by which the academy not only added to its superb collections, but increased the sum total of human knowledge.

In touching on the special laboratory features of the working specialists, Dr. Dixon mentioned the work of Cope and Leidy, the latter of whom he called the Cuvier of America, and not only referred to his early work in revealing the far west to the world, but in discussing Leidy as a bacteriologist in connection with the bacteriological department of the academy, the speaker went on to point out the enormous value to man of a study of the abstract sciences and their practical application, especially in the case of the microscopic and sub-microscopic organisms and organic matter, which played their part in disease and which the bacteriologists and students of entomology were busily engaged in studying and isolating. Dr. Dixon quickly ran over the facts now known to science, showing how the terrible scourges of mankind are now more or less under control through the quiet researches of the bacteriologists; how malaria and yellow fever are transmitted to man by the mosquito, the plague by the rat flea, the sleeping sickness by the tsetse fly, the leprosy parasite by house vermin; and the part played by flies in carrying typhoid; while not only the great gain to the world through the protection and saving of human life by reason of our new knowledge was brought out, but also the fact that the quiet laboratory workers in botany and entomology and allied natural history sciences, who are now engaged in investigations looking to the protection of the world from the enormous losses to plant and animal life through various plant and animal pests. Some of the figures which Dr. Dixon quoted were of almost unbelievable magnitude, losses to cereals alone through preventable causes being annually put down to three hundred million dollars, and animal products suffering a like amount, with losses to cotton alone through plant enemies running up to as high as eighty-five million dollars. Dr. Dixon mentioned these things as showing the immense debt that the world owed to the patient workers in these sciences which bear heavily on the relations of man to men.

In this connection Dr. Dixon quoted a telling paragraph from Washington, showing his early appreciation of the necessary relation of state and science in a republic. Said the President in his first message to Congress: "Nor am I less persuaded that you will agree with me in the opinion that there is nothing more deserving your patronage than the promotion of science and laboratories, knowing that in every country it is the surest basis of public happiness, and in one in which the measures of the government receive their impressions so immediately from the sense of the community as ours it is proportionately essential."

In calling attention to the reputation of the academy during its long history, Dr. Dixon quoted a letter from Emerson written in 1854, and read two letters from Darwin written in 1860, as showing the way in which the great thinkers of the world viewed the academy and its collections. Dr. Dixon expressed the thought that this occasion was a very happy one, since he was able through the generosity of the state, which had appropriated money for building purposes, to turn over a fireproof building in which after one hundred years of risk the great collections would now be safely housed. Dr. Dixon explained that no money of the state had ever been used for the maintenance of the academy, and that the academy was an institution supported by a small endowment, which enabled it to carry on this great work through the sacrifice of those associated with it.

In connection with the centennial, the academy received a number of congratulatory letters and resolutions from scientific institutions here and abroad—in all some three hundred. Among them were those of the Royal Fredrik's University of Christiania, Norway; the University of Lyons; the Royal Academy of Literature, Science and Arts of Belgium, and from the Prorector of the Royal Albertus University of Koenigsberg, Prussia, and one from the Buffalo Academy of Natural Sciences.

THE TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA

Meeting held at Columbia, S. C., Feb. 21 and 22, 1912

The President, D. J. HOWELL WAY, Waynesville, N. C., in the Chair

The New Officers Elected

The following were elected to the offices named: President, Dr. A. E. Baker, Charleston, S. C.; vice-presidents, Drs. A. B. Knowlton, Columbia, S. C., A. J. Crowell, Charlotte, N. C., and A. L. Gray, Richmond, Va.; secretary-treasurer, Dr. Rolfe E. Hughes, Laurens, S. C.

Norfolk, Va., was selected for the next meeting place, Feb. 19 and 20, 1913.

Some Clinical and Experimental Observations Concerning Proctoclysis

DR. HUGH H. TROUT, Roanoke, Va., whose article will be published in full in a later issue of THE JOURNAL, discussed the relative value of fresh water and normal salt solution in proctoclysis. He concludes that fresh water is as effective as normal salt solution in proctoclysis, and is freer from several of the inconveniences of the latter.

DR. C. L. MINOR, Asheville, N. C.: I have obtained excellent results in many conditions from colonic lavage, using a normal salt solution which is retained for half an hour, and of which about 30 per cent. only will be absorbed in that time. I use normal salt solution because, being isotonic, it will be less irritating to the wall of the bowel and less damaging to its epithelium, and because I believe that a larger quantity will be absorbed. I have had no injury to the kidney.

Bilateral Cancrum Oris Complicating Typhoid

DRS. JOHN S. CLIFFORD and BAXTER S. MOORE, Charlotte, N. C.: This complication of typhoid is exceedingly rare. Of the nine cases taken from the literature by Keen, five were fatal, and in one the final result was not recorded; the only case of bilateral involvement terminated in death. Our case was sent in to the hospital with a well-defined gangrenous area about 1¼ inches in diameter on the right cheek, and the superior maxilla was invaded well into the antrum. The child, aged 8, had had typhoid for four weeks previously and no attention had been paid to hygiene. The cheek was treated with the actual cautery extending well into the surrounding healthy tissues, seemingly without any regard for the cosmetic results. Five days later the left side became involved and the tissues were divided down to and through the orbicularis muscle. The cautery was applied on three different occasions, whenever indicated. The convalescence was slow and tedious. The inferior maxilla was limited in motion, it being possible for the child to open her mouth, leaving a space of about ⅜ inch between the teeth. A plastic operation was recommended, but refused by the parents. The child recovered.

Safeguarding and Lessening the Disagreeable Features of Surgical Operations

DR. SOUTHGATE LEIGH, Norfolk, Va.: I have used nitrous oxid-oxygen anesthesia in about 900 cases with no fatalities. It is by far the safest, pleasantest and most satisfactory form of anesthesia yet devised. The chief drawback is that a skilled manipulator is required. The adverse reports appearing recently are the outcome of erroneous methods or lack of experience.

DISCUSSION

DR. STUART MCGUIRE, Richmond, Va.: About a month ago I investigated this method of anesthesia. I found in many hospitals the practice was to first give the patient a dose of morphin and scopolamin, then administer nitrous oxid-gas and oxygen, then infiltrate the line of incision with cocain, and finally to give enough ether to keep the patient quiet. The method, as I observed it, ought not to be called "oxygen and gas anesthesia," but "the combination anesthesia." Many of the patients were blue, most of them struggled, and the majority vomited afterward. It is true they waked up quickly when the anesthetic was withdrawn, but it is equally true they often waken before it is desired that they shall do so. In Richmond many surgeons have experimented with this method, and I am told that in one hospital three patients died on the table under its influence, in the past six months.

DR. C. L. MINOR, Asheville, N. C.: There is at least one class of cases in which I have had the opportunity to satisfy myself of the superiority of nitrous oxid as an anesthetic. I refer to cases of pulmonary tuberculosis needing operation. In such cases the results after nitrous oxid are much better than with ether or chloroform, the action of these two latter on a tuberculous respiratory tract being often very disastrous.

Hypertrophied Thymus and the Status Lymphaticus

DR. J. H. TAYLOR, Columbia, S. C.: In my first case death occurred from violent excitement in a child, 5½ years of age. While some cases of status lymphaticus present little or no enlargement of the thymus, and thymic deaths occur where no other lymphoid changes are found, except the enlarged gland, yet, often there is an apparent relationship between the two conditions that has as yet not been satisfactorily explained. Whether the hypertrophied thymus is a coincident lesion, a cause or merely an effect of the status lymphaticus, is still a matter of conjecture. My second case was one of enlarged thymus complicating cretinism in which appeared at the second month a constant expiratory and inspiratory stridor affected by neither position nor sleep, together with frequent and severe attacks of dyspnea and engorgement of the superficial veins of the neck during crying. Roentgen therapy, within ten days, produced a striking alleviation of the symptoms associated with enlarged thymus. The stridor became much less severe and the asthmatic attacks gradually diminished both in severity and frequency until, at the present time, they have entirely disappeared, as has the stridor also. The alleviation of the symptoms antedated the giving of thyroid extract, but, following the latter, the progress in every respect was surprisingly rapid.

The Recognition and Treatment of Thyroid Disease

DR. JOHN ROGERS, New York, N. Y.: The chief distinguishing marks of hypothyroidism are the dry skin, anemia, puffiness about the eyelids and supraclavicular regions, edema of the tibial regions, headache, mental sluggishness, subnormal temperature and constipation; of hyperthyroidism, the vasomotor irritability with its characteristic tachycardia, moist skin, subjective and objective nervousness, and slightly elevated temperature. In both conditions there is a very definite "fatigability." Goiter is about equally common in either state, and, likewise, it is not necessarily present. If present, it is very useful for determining the diagnosis in an otherwise often indefinite symptomatology. Exophthalmos frequently coexists with a marked degree of hypothyroidism. The thyroid probably has a universal "activating" function. Its secretion varies in quantity and quality, according to the bodily needs. This secretion contains at least two iodized proteins; one of these, a nucleoprotein, stimulates or "activates" specifically the chromaffin system; and another, a globulin, activates all other organs and tissues. All cases of hyper- or hypothyroidism are, then, an expression of glandular fatigue in which the epithelium in its attempt to metabolize iodin either disintegrates and forms an excess of nucleoprotein, as in Graves' disease, or it atrophies and causes myxedema. Both conditions often coexist. Cases of simple goiter, without constitutional disturbance, represent a compensatory hypertrophy, and the gland should be helped by feeding with the normal thyroid secretion or combined nucleoprotein and globulin, and should not have its efforts injured by operation. Degenerative changes which, by pressure on the gland itself, interfere with the nutrition and function of the sound parts, or by pressure on the surrounding structures, damage the general nutrition, should be removed, but all the sound glandular tissue possible should be saved.

Acute toxemic thyroidism can best be treated by antithyroid serum. Chronic hyperthyroidism, represented by the average case of exophthalmic goiter, can generally be helped by the antithyroid serum, which cuts down the excess of nucleoprotein and globulin and so checks auto-activation, but it is more logical to enforce rest for the gland by cutting off more or less of the blood and nerve-supply and, later, by thyroid feeding. In this disorder the assumed excess of nucleoprotein in the secretion stimulates specifically the sympathetic and so the secretory nerve-supply of the thyroid, and so continues the fatigue of the gland. Partial thyroidectomy is only indicated in this disorder when one part of the gland is manifestly more diseased than another. This appears to be the case in some "leaking retention cysts" in which the altered secretion of a damaged portion of the gland intermittently or constantly damages the rest of the organ by stimulation of the sympathetic and so induces a general thyroid fatigue. The localized disease should be excised. Cases of hyperthyroidism with symmetrically enlarged and evenly damaged glands cannot be permanently cured by partial thyroidectomy, and the damaged portion of the gland which remains is generally insufficient. Cases of hypothyroidism when existing in combination with hyperthyroidism cannot be benefited until the hyperthyroidism is relieved by section of more or less of the blood- and nerve-supply, or by antiserum. Pure hypothyroidism or myxedema is much more difficult to cure than is ordinarily supposed. The active thyroid ingredients are far better than the commercial thyroid tablets; but these often have to be combined with adrenal or with pancreas feeding. Extracts of human thyroid, given subcutaneously, are sometimes necessary. A temporary hypothyroidism is exceedingly common, especially in pregnancy, and is not unusual in young children and often accompanies fatigue in "nervous" individuals.

DISCUSSION

DR. STUART MCGUIRE, Richmond, Va.: As to the frequency of malignant degeneration developing in these cases, in the last hundred cases that have come under my observation, there have been three cases of cancer.

DR. J. W. JERVEY, Greenville, S. C.: In a certain proportion of cases the lymph tissues of the throat are involved, and there seems to be a distinct reason to believe that there is some condition simulating the so-called status lymphaticus. While in many cases we feel that operative interference is absolutely necessary, yet we must be very cautious how we use a general anesthetic for operation on the lymph structures of children. We must keep in mind the dangers of the general anesthetic in cases of status lymphaticus. Many fatalities have been reported.

DR. A. L. GRAY, Richmond, Va.: An infant, 9 days old, had the characteristic croupy breathing, paroxysmal attacks of dyspnea and died before morning. Another patient, a child one year of age, following the bromid treatment, lived for six months, and then died from bronchopneumonia. I am satisfied both these cases were thymus enlargement or status lymphaticus.

V. 58
1912

DR. E. W. CARPENTER, Greenville, S. C.: I saw a case in which all symptoms pointed to laryngeal diphtheria. An intubation was done, with no relief of the respiratory embarrassement. Several hours later the child died, without warning, from cardiac failure. Autopsy showed a normal larynx. I was forced to the conclusion that a rupture of the normal balance of the ductless glands, manifesting itself as an acute thymus intoxication with obstruction was the cause of death.

DR. PHILIP ROY, Washington, D. C.: Sometimes hyperthyroidism seems to be Nature's effort to protect the system against intestinal auto-intoxication and probably other auto-intoxications. The intestinal auto-intoxication is an intoxication caused by some faulty metabolism of the protein molecule. Cases have been reported of hyperthyroidism occurring in gastric retention.

Chronic Nasal Diphtheria

DR. CLIFTON M. MILLER, Richmond, Va.: Diphtheria of the nose, essentially chronic, has been recognized since 1858, but in spite of this, it has received but scant attention in standard text-books. Its symptomatology is almost entirely objective. Such symptoms are often attributed to some other cause. Occasionally slight rise of temperature is present in the beginning, but does not last more than twenty-four hours. After this, nasal obstruction with increased nasal discharge and usually excoriation of the upper lip are the only symptoms. It usually occurs in childhood, and is most frequent in the summer months or early fall; has no tendency to spread to any tissue adjacent to the nose and these children run about and mix with their associates. Foreign body in the nose is the most frequent diagnosis in these cases. The prognosis is good. Death is liable to occur in children under 3 years of age. The virulence to cause infection in others is as great as that of acute attacks, and its chronicity is due to a high resistance in the patient affected. I have seen a number of cases, all of which were confirmed by bacteriologic examination and in which antitoxin effected a cure.

Diphtheria Carriers

DR. HENRY PAGE, Fort Moultrie, S. C.: The inability to control the yearly outbreaks of diphtheria that occur in every city is due to the fact that a large number of persons, in apparent good health, are constantly spreading infection. Carriers are not carefully sought for because no means of sterilizing these carriers has been found effective, and to keep such persons in quarantine indefinitely is an absurd proposition. Two cases were successfully treated by overriding the infected throats of the carriers with a culture of *Staphylococcus pyogenes aureus*. If this method is proved to be safe, effective and prompt in removing virulent bacilli from a carrier's throat, it will offer a possibility to sanitarians of removing diphtheria from the list of dreaded infections.

Surgery of the Central Nervous System

DR. CHARLES H. FRAZIER, Philadelphia, Pa.: An abstract of this paper was published in THE JOURNAL, March 30, p. 967.

Clinical Value of the Polygraph

DR. PHILIP ROY, Washington, D. C.: Tracings showing extra systoles, nodal rhythm, heart-block and pulsus irregularis perpetuus, without doubt all point to organic disease in the primitive cardiac tissue. Polygraph tracings help to determine the rest power and the work power of the heart. I doubt whether pulsus alternans should be called an irregularity of the heart. It points to a more grave condition than that of irregularity, namely, a want of contractile power in the muscle of the heart—one of the fundamental qualities of the heart muscle. In treating diseases of the heart the three cardinal points are rest, diet and digitalis. The assayed tincture of digitalis is, without doubt, the most reliable preparation of digitalis. Digitalis often causes temporary heart-block, and this is the reason, probably, why some of the older therapeutists cautioned against the use of digitalis after the age of 60. Heart-block is most apt to occur after that age, and probably the primitive cardiac tissue is especially sensitive to the action of digitalis.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Journal of Indiana State Medical Association, Fort Wayne

March, V, No. 3, pp. 111-152

1 *Diet, with Special Reference to Meat Question. C. N. Howard, Warsaw.
2 Conservation of Hearing. J. F. Barnhill, Indianapolis.
3 *Incidental Rôle of Streptococcus Infection in Pernicious Anemia. G. W. McCaskey, Fort Wayne.

1. **Diet.**—It is suggested by Howard that from the present trend of thought it would seem unlikely that meat will come to be finally classed in the same general category with tea, coffee, alcohol and tobacco: that is, with things which are not taken for the purpose of bettering the physical, mental or spiritual condition, but taken simply and only because their taste is good and they temporarily produce a comforting sense of stimulation and well-being.

3. **Streptococcus Infection.**—In seven cases of pernicious anemia, streptococci were the only organisms found. The relationship of the streptococci found in these cases to the real pathology of the disease raises some very interesting questions. McCaskey thinks it is probably accidental. But even if this is true, its importance is very great. The toxins produced by certain strains of streptococci have been shown to be distinctly hemolytic. If this is true, increased hemolysis becomes an important auxiliary etiologic factor. Furthermore, if the view which apparently prevails, viz., that excessive hemolysis from an unknown cause constitutes the essential basis of pernicious anemia, the possibility of an obscure streptococcal nidus gradually pouring the toxins into the circulation and playing a conspicuous rôle in the etiology of the disease, McCaskey regards as a suggestion well worth serious consideration. The streptococcemia is sometimes amenable to treatment by autogenous vaccines derived from cultures made from the patient's blood. Blood cultures should, therefore, be made in all cases of pernicious anemia in which elevation of temperature, even though slight, occurs.

St. Paul Medical Journal, Minn.

March, XIV, No. 3, pp. 121-185

4 Impressions of a Visit to the International Hygiene Exposition, Dresden, 1911. J. Knott.
5 Relation of Nasal Disease to Eye Symptoms. E. W. Benham, Mankato, Minn.
6 Plea for Thorough and Systematic Study of Materia Medica and Therapeutics. F. Ellingwood, Chicago.
7 Letters to Physicians: Neurasthenia Is Neurosthenia. G. M. Gould, Ithaca, N. Y.

Southern Medical Journal, Nashville, Tenn.

March, V, No. 2, pp. 69-142

8 *Pellagra in Tennessee. J. A. Albright, Nashville, Tenn.
9 *Etiology of Pellagra. J. L. Jelks, Memphis, Tenn.
10 Pathology of Pellagra. H. F. Harris, Atlanta, Ga.
11 *Pseudopellagra. C. H. Lavinder, U. S. P. H. and M.-H. S.
12 *Cursory Study of Skin Manifestation of Pellagra, with Reference to Its Special Importance from Diagnostic Standpoint. H. E. Menage, New Orleans.
13 Symptom-Complex Called Pellagra. J. S. Tuberville, Century, Fla.
14 Treatment of Pellagra. J. A. Kimbrough, Thomasville, Ala.
15 *Idem. L. Leroy, Memphis, Tenn.
16 *Prognosis of Pellagra. C. C. Bass, New Orleans.
17 Pellagra in Italy. H. P. Cole, Mobile, Ala.
18 *Wherein Diagnosis of Pellagra Is of Surgical Importance. L. Guerry, Columbia, S. C.
19 Pellagra: Sociologic and Therapeutic Study. G. M. Niles, Atlanta, Ga.
20 Are the Jews Immune to Pellagra? B. Wolff, Atlanta, Ga.
21 Pellagra. W. C. Brownson, Asheville, N. C.

8, 9, 12, 15 and 16. Abstracted in THE JOURNAL, Dec. 2, 1911, pp. 1940 and 1941.

11. **Pseudo-Pellagra.**—Lavinder emphasizes the need of more extensive and more exact clinical observations on pellagra in the United States; to determine more clearly the value of data regarding the existence of symptom-complexes or diseases similar to pellagra; to appreciate at its true value what is meant by pseudo-pellagra; and to urge the need of careful studies on pellagra as seen in public institutions, especially in insane asylums. Such observations and studies would, he says, be of particular value in the United States, where the influence of the corn theory of the disease has no such weight, as it has especially in Italy, and where consequently individual observa-

tions can be made unprejudiced by the veneration of any particular etiologic school. Why, he asks, create a pseudo-pellagra? We may, with equal right, it would seem, create a pseudo-measles or pseudo-erysipelas or a pseudo-beriberi.

18. **Diagnosis of Pellagra Is of Surgical Importance.**—It is most important in Guerry's opinion to keep in mind that there are both acute and chronic cases; cases with and without eruption; that the onset frequently is most insidious and atypical; that the disease is a malady as protean as malarial fever, tuberculosis or hysteria. We must, he says, reckon with pellagra as a causative factor in intestinal hemorrhage of obscure origin. We also have to look at these cases from the standpoint not only of diagnosis, but it is important to remember that these cases are living on a very narrow margin of safety, and that even when surgery is imperative for other conditions that may arise they are extremely poor surgical risks, and the mental symptoms can be and have been greatly exaggerated by anesthesia and operation, occasionally being followed by acute insanity, from which they never relapse, but die.

Virginia Medical Semi-Monthly, Richmond

March 22, XVI, No. 24, pp. 601-632

22 Failure of Physicians to Diagnose Uncinariasis. W. A. Plecker, South Hill.
23 Diseases and Degenerations Due Directly to Alcohol. T. D. Crothers, Hartford, Conn.
24 Physician and His Influence. I. M. Hardy, Washington, N. C.
25 School Inspection, Norfolk, Va. C. L. Harrell, Norfolk.
26 Subnormal Child in School. M. P. Doyle, Norfolk.

American Journal of Public Health, New York

February, II, No. 2, pp. 67-134

27 Prevention of Infant Mortality by Breast Feeding. W. H. Davis, Boston.
28 Chemical Disinfection of Sewage. E. B. Phelps, Boston.
29 Sanitary Regulation of Oyster Industry. F. P. Gorham.
30 Public Health Renaissance. A. J. Douglas, Winnipeg.
31 *Mosquito Larvacide-Disinfectant and Methods of Its Standardization. S. T. Darling, Ancon, C. Z.
32 Relation of Putrescibility of Settling and Non-Settling Suspended Matter in Sewage. A. Lederer, Chicago.
33 *Preservation of Water Samples by Salting. M. P. Ravenel and K. W. Smith, Madison, Wis.
34 Some Legal and Practical Aspects of Bottled Milk Regulation. J. O. Jordan, Boston.
35 Thirty-Five Strains of Streptococci Isolated from Samples of Milk. G. F. Ruediger, Grand Forks, N. Dak.
36 Laboratory as Prophylactic Measure. J. F. Arteaga, Havana, Cuba.
37 New Method of Sewage Sludge Treatment. R. Hering. ?
38 *Municipal Inspection of Food-Supplies. J. O. Jordan, Boston.

31. **Mosquito Larvacide-Disinfectant.**—For the destruction of mosquito larvæ, the Sanitary Department in the Canal Zone has a larvacide prepared from crude carbolic acid, the details of manufacture of which were worked out by J. E. Jacob, chemist, Board of Health Laboratory. The special features of the product are its cheapness, high larvacidal and germicidal powers, miscibility with water, relative uniform composition and the methods used to determine its larvacidal and algacidal value. The larvacide is prepared from crude carbolic acid, a substance which as usually supplied contains from 5 per cent. to 30 per cent. tar acids, together with a large amount of inert neutral oils. The crude acid is immiscible with water, and is a very inefficient disinfectant on account of its inability to come into intimate contact with micro-organisms. When, however, the crude carbolic acid is made into a liquid soap with resin and alkali by means of heat, a product results which emulsifies on the addition of a large amount of water. If the germicidal value of the emulsion is determined by the method of Rideal and Walker, it will be found to be greatly enhanced, frequently being from two to five times greater than that of pure carbolic acid. The product is not only a most effective destructive agent for mosquito larvæ, but is a valuable cheap disinfectant.

Method of manufacture: To insure the manufacture of a uniform product requisitions call for crude carbolic acid of a specific gravity not greater than 0.97 and to contain not less than 30 per cent. tar acids. One hundred and fifty gallons of crude carbolic acid are heated in an iron tank having a steam coil with steam at 50 pounds pressure. Two hundred pounds of finely crushed and sifted common resin are dissolved in the heated acid, and then 30 pounds of caustic soda dissolved in 6 gallons of water are added. There is a mechanical stirring rod attached to the tank. The product is ready in a few minutes, yielding about 3½ barrels. Cost per gallon, $0.1413. The germicidal value when tested with *B. typhosus* in an aqueous emulsion of the larvacide has an R-D coefficient of from 2 to 5. As a mosquito larvacide it is used by spraying an aqueous emulsion (one part larvacide to five of water) over the surface and along the margins of pools and ponds or other mosquito-breeding places, so that the resulting dilution of the larvacide has a thin milky opalescence representing approximately a dilution of 1 to 5,000.

33. **Preservation of Water Samples by Salting.**—Ravenel and Smith conclude that neither the salting method proposed by Remlinger, nor the preservation by means of caffein or resorcin, has any practical value whatever. We are, he says, forced for the present, to rely on refrigeration for preventing changes in the samples of water.

38. **Municipal Inspection of Food Supplies.**—As an outcome of Boston's experiences in municipal food inspection, the following conclusions and comments are submitted by Jordan for the more efficient handling of those problems over which boards of health are ordinarily supposed to have supreme control. It is suggested that all restaurants, ice-cream plants, sausage factories, egg-breaking, preserving, fish-smoking and lobster-boiling establishments be licensed by boards of health, with authority to frame rules for the government of the above places, as well as to revoke said licenses. That boards of health have authority to prohibit the exposure of certain foods; to require that all stores where foods are sold shall have proper lavatory facilities; and that no store where articles of food are sold or prepared shall be used for domestic purposes, or open directly into living rooms, and that the water-closets in such stores shall be located properly.

V. 58
1912

Journal of Medical Association of Georgia, Augusta

March, I, No. 8, pp. 277-311

39 Vincent's Angina. T. E. Oertel, Augusta.
40 Cystic Colloid Goiter. W. S. Goldsmith, Atlanta.
41 Pneumonia and Its Treatment. J. B. Camp, Carrollton.
42 Salvarsan. W. L. Champion, Atlanta.
43 Excision of External Organs of Generation for Obstinate Pruritis. R. C. Franklin, Graymont.
44 Abdominal Surgical Complications of Typhoid. J. R. B. Branch, Macon.
45 Preoperative and Postoperative Treatment of Appendicitis. H. S. Munroe, Columbus.
46 The Nervous Woman. L. M. Gaines, Atlanta.

Archives of Pediatrics, New York

March, XXIX, No. 3, pp. 161-240

47 Analytic Study of Twenty Cases of Infantile Paralysis. A. Sophian, New York.
48 *Quick Macroscopic Agglutination Test (Bass-Watkins). J. Ruhrah, Baltimore.
49 Bass-Watkins Typhoid Agglutination Test. L. J. Menville, Houma, La.
50 *Subcutaneous Injection of Small Quantities of Human Blood in Spontaneous Hemorrhage of New-Born. A. W. Myers, Milwaukee, Wis.
51 *Bacterial Counts and Acidity Determinations of Different Grades of Milk as Delivered to Consumer. E. H. Schorer, Boston.
52 Edema in Infants. P. A. Potter, East Orange, N. J.
53 Mineral Salts and Their Relation to Dietary of Infants and Children. B. R. Hoobler, New York.

48. This test was described by Bass and Watkins in the *Archives of Internal Medicine*, December, 1910, p. 717, and abstracted in THE JOURNAL, Jan. 14, 1911, p. 156.

50. **Spontaneous Hemorrhage of New-Born.**—In Myers' case, when the child was 32 hours old (June 20, 12 M.), a large stool was expelled, composed entirely of tarry blood clots. This was repeated at 2, 3, 4, 5, 6 and 8 p. m. At 4, 6 and 8 p. m. the expulsion of the bloody stools was accompanied by vomiting of considerable quantities of clotted blood. During the night the child slept quietly until 4 a. m., when there was a bloody stool with vomiting of blood. This was repeated at 7 a. m., and at 10 and 11:30 a. m. there were bloody stools without vomiting. When seen for the first time at noon of June 21 the child's condition seemed almost hopeless. The weight had fallen to 4 pounds 8 ounces; the mucous membranes were very pale. The skin was colorless. The cord was normal, no bleeding occurred at this point, and there were no hemorrhages into the skin or the visible mucous membranes. Three cubic centimeters of blood were drawn from a vein of the mother's arm and quickly injected into the subcutaneous tissues of the baby's buttock before there was time for the blood to coagulate

in the syringe. This was done at 12 M. At 2:30 p. m. a stool was passed containing rather old-looking clots and a small amount of fresh blood.

At 4:30 p. m. a second injection of maternal blood was given into the other buttock. This time an attempt was made to obtain a larger amount of blood. Ten cubic centimeters were drawn into the syringe, but it took a little longer to obtain it and a longer time to inject it, the result being that coagulation occurred in the syringe when only 5 c.c. had been injected. The amount proved to be quite sufficient. There was absolutely no more bleeding. The child was put to breast and nursed well after the first few times. There was no vomiting and the following stools presented the typical meconium character, gradually changing to the milk-stool appearance in a few days. The blood injected was quickly absorbed, and a few hours afterward the site of the injection could be recognized only by the needle puncture in the skin. The subsequent history of the child was uneventful.

51. **Bacterial Counts and Acidity Determinations.**—Based on observations, both at the places of production and distribution and on the relatively small numbers of bacteria found at times in all of the milk supplies examined during the year, Schorer says it is evident that it is comparatively easy generally to produce milk of low bacterial count, but that the greatest care must be constantly exercised to prevent occasional high counts even in certified milk. While certifying boards must certainly consider such occasional increases in bacterial content, revocation of the license to certify is apparently warranted only when proper conditions are not obtainable, either through refusal to comply with suggestions or through incompetency. If certifying commissions will take this into consideration, Shorer believes the supply of certified milk will be much increased. As conditions are at present, a considerable part of milk of the certified grade is not certified because producers of such milk are unwilling to risk the reputation of their milk without being given a fair chance to rectify errors leading to counts above 10,000 bacteria per cubic centimeter. A supply composed of the product of a considerable number of good producers is more constant because of dilution. After all, bacterial counts are only circumstantial evidence, and milk with the lowest counts may at times be the means of disseminating a communicable disease.

Pennsylvania Medical Journal, Athens

March, XV, No. 6, pp. 423-514

54 Aids to Diagnosis in Otology and Their Clinical Significance. J. F. McKernon, New York.
55 Cancer Problem. C. B. Longnecker, Philadelphia.
56 Diagnostic Evidence Obtained by Means of Roentgen Rays in Carcinoma of Stomach. G. E. Pfahler, Philadelphia.
57 *New Sign in Diagnosis and Treatment of Ulcer and Carcinoma of Stomach. E. Zugsmith, Pittsburgh.
58 *Treatment of Backward Displacements of Uterus. X. O. Werder, Pittsburgh.
59 Intussusception in Children. A. R. Matheny, Pittsburgh.
60 Meeting Needs of the Cripple in the Community. D. C. McMurtrie, New York.
61 Physician's Duty Toward Conserving Public Health. T. P. Cole, Greensburg.

57. Abstracted in THE JOURNAL, Oct. 21, 1911, p 1480.

58. Abstracted in THE JOURNAL, Nov. 4, 1911, p. 1558.

Journal of Pharmacology and Experimental Therapeutics, Baltimore

March, III, No. 4, pp. 387-475

62 *Effect of Nicotin Injection on Adrenal Secretion. W. B. Cannon, J. C. Aub and C. A. L. Binger.
63 Quantitative Studies on Gastro-Intestinal Absorption of Drugs: II. Absorption of Sodium Iodid. P. J. Hanzlik, Cleveland.
64 Action of Various Diuretics in Uranium Nephritis. W. de B. MacNider, Chapel Hill, N. C.
65 Isocalycanthin and Its Quaternary Base. H. McGuigan and C. L. von Hess.

62. **Effect of Nicotin Injection on Adrenal Secretion.**—This investigation was undertaken to learn whether nicotin can, in fact, increase the discharge of epinephrin into the blood. It was found that nicotin, as used in these experiments, does not produce inhibition of the pulsating intestinal strip. Blood taken from near the openings of the adrenal veins after nicotin injection differs from blood removed from the same region before the injection, in producing inhibition of a pulsating strip of intestinal muscle. This difference does not appear if nicotin is injected after the adrenal glands have been removed. The conclusion is, therefore, reached by the authors that injection of nicotin in small amounts (0.0035 to 0.0075 gram in cats) results in augmented adrenal secretion.

Albany Medical Annals, N. Y.

March, XXXIII, No. 3, pp. 129-190

66 Progress in Syphilology. H. S. Bernstein, Albany, N. Y.
67 Malignant Renal Tumors of Congenital Origin in Childhood; Report of Two Cases. J. L. Bendell, Albany.

Vermont Medical Monthly, Burlington

March 15, XVIII, No. 3, pp. 53-78

68 Treatment for Alcoholics and Drug Habitués. W. L. Wasson, Waterbury.
69 Disease of Criminality. G. G. Marshall, Rutland.
70 Cell; Its Relation to Pharmacodynamics. D. Marvin, Essex Junction.

Journal of Infectious Diseases, Chicago

March, X, No. 2, pp. 129-256

71 *Rapid Filtration of Agar and Gelatin. W. L. Holman, Pittsburgh.
72 Cholera. C. Krumwiede, Jr., J. S. Pratt and M. Grund, New York.
73 *Plasma Cells in Tonsils. D. J. Davis, Chicago.
74 *Bacteriology and Pathology of Tonsils, with Special Reference to Chronic Articular, Renal and Cardiac Lesions. D. J. Davis, Chicago.
75 *Amebacidal Action of Emetin. W. B. Wherry, Cincinnati.
76 *Numbers and Types of Bacteria Carried by City Flies. J. C. Torrey, New York.
77 Complement Fixation Reaction in Diagnosis of Contagious Abortion of Cattle. W. P. Larson, Madison, Wis.
78 Studies on Pellagra Based on Occurrence in 1910 in Cook County Institutions at Dunning, Ill. F. B. Clarke, R. C. Hamill, L. J. Pollock, A. H. Curtis and G. F. Dick.
79 Bactericidal and Hemolytic Powers of Paraffin Plasma and of Serum. T. Addis, Edinburgh.
80 Bacillus Mesentericus and Allied Organisms. O. C. Gruner and J. R. Fraser, Montreal, Canada.
81 Parturient Paresis (Milk Fever) and Eclampsia. D. J. Healy and J. H. Kastle, Lexington, Ky.
82 Toxic Character of Colostrum in Parturient Paresis. J. H. Kastle and D. J. Healy, Lexington, Ky.
83 *Internal Secretion of Mammæ as Factor in Onset of Labor. D. J. Healy and J. H. Kastle, Lexington, Ky.
84 Rideal-Walker Test and Rideal-Walker Method. S. Rideal and E. K. Rideal.

71. **Rapid Filtration of Agar and Gelatin.**—The filtering apparatus used by Holman consists of: An enameled pot 8.5 inches high by 8 inches in diameter, with a cover; four ordinary bottles 7 inches high by 2½ inches wide, with a neck 1½ to 2 inches in diameter (not wider); canton flannel cut in convenient sizes to cover mouths of bottles; a wooden appliance to steady the bottles when in position; small glass rods. The canton flannel is tied firmly over the necks of the glass bottles. The wooden apparatus is placed in the enameled pot containing the prepared nutrient agar. The bottles are put in position with the covered necks downward resting on the glass rods. The cover is put on the pot and the whole placed in the steam sterilizer, heated to 120 C. for a few minutes, to permit a firm coagulation of the egg, and then allowed to cool slowly. The principle of this filtering method depends on the expansion of the air in the inverted bottles which, bubbling out during the heating, leaves a vacuum on subsequent cooling, and thus exerts a strong suction on the medium, which is slowly drawn into the bottles. The glass rods prevent the bottles from being drawn tightly to the bottom of the container, which would of course stop entirely all further filtration. The agar prepared and filtered as above is perfectly clear, much whiter than ordinary agar, and there is no clouding on subsequent sterilization.

73. **Plasma Cells in Tonsils.**—In the tonsils of the fetus and the new-born, Davis says plasma cells are not present. They first appear about the second or third week, and thereafter are constantly found in the tonsils. This is about the time, or shortly after the time, that bacteria invade the tonsillar crypts. In hypertrophied tonsils they are more numerous than in apparently normal tonsils. Their presence may be interpreted as indicating the existence in the tonsils of a chronic infectious process or the absorption of toxic or irritating products.

74. Abstracted in THE JOURNAL, Dec. 30, 1911, p. 2169.

75. **Amebacidal Action of Emetin.**—Emetin in 1-20,000, 1-100,000 and 1-200,000, dilutions killed the amebas in one of the five series of experiments conducted by Wherry after twenty-three and one-half hours' exposure, at 36 to 38 C. None of these dilutions was amebacidal in an hour. Wherry thinks it seems fair to presume that when amebacidal action was manifested the emetin acted on the trophozoits alone, and that fail-

ure to kill may be attributed to the presence of cysts. While emetin in 1-20,000 dilution was found to kill the symbiotic bacterium in forty-eight hours, it did not exert such an action in twenty-four hours in the amebæ-bacteria mixtures. Exposure to body temperature for twenty-four hours did not kill this saprophytic ameba.

76. **Bacteria Carried by City Flies.**—Flies examined by Torrey up to the latter part of June were free from fecal bacteria and carried a homogeneous flora of coccal forms. During July and August there occurred periods in which the flies examined carried several millions of bacteria, alternating with periods in which the number of bacteria were reduced to hundreds. The scanty flora probably indicated the advent of swarms of recently hatched flies. Fecal bacteria of the colon type were first encountered in abundance the early part of July. The bacteria in the intestines of the flies were 8.6 times as numerous as on the surface of the insects. On the surface of the flies the colon-group bacteria constituted 13.1 per cent. of the total; and within the intestine 37.5 per cent. of the total. Of the lactose fermenters, isolated and identified, 79.5 per cent. belonged in the colon-aerogens group and 20.5 per cent. in the acidi lactici group. Fifteen cultures of streptococci, isolated and identified, were distributed among the equinus, fecalis and salivarius groups. There were none of the pyogenes type. The most important isolation were three cultures of *B. paratyphosus*, Type A. Bacteria of the paracolon type causing a final intense alkaline reaction in litmus milk and fermenting only certain monosaccharids were frequently encountered during August.

83. **Internal Secretion of Mammæ in Onset of Labor.**—It is evident from Healy and Kastle's results of an experimental study that the colostrum of the normal cow, as well as that of the cow suffering from parturient paresis, contains a substance, or substances, capable of bringing about abortion in pregnant guinea-pigs. Whether this substance causing the abortion is a hormone or a toxin can only be determined by further experiment, which they hope to undertake as soon as the necessary material can be obtained. The substance, or substances, in the fresh colostrum of the normal cow which excite the pregnant guinea-pigs to premature labor, withstands heating to boiling for a short time. In this respect it is similar to the hormones and differs from the soluble ferments and many toxins. It is evident from these experiments that the internal secretions of the mammary gland stimulate the mother to labor and the birth of the offspring.

Journal of Arkansas Medical Society, Little Rock

February, VIII, No. 9, pp. 241-262

85 Repair of Injuries to Parturient Canal Sustained During Delivery. J. P. Runyan, Little Rock.
86 Treatment of Typhoid and Its Most Frequent Complications. O. O. Hammonds, De Queen.
87 Curettage; Its Indications and Technic. R. L. Saxon, Little Rock.
88 Neurasthenia and Psychasthenia—a Difference. S. T. Rucker, Memphis, Tenn.

Journal of Biological Chemistry, Baltimore

March, XI, No. 2, pp. 97-167

89 Hydantoins; Action of Potassium Thiocyanate on Alanin. T. B. Johnson.
90 *Fasting Studies; Distribution of Nitrogen During Fast of 117 Days. P. E. Howe, H. A. Mattill and O. B. Hawk, Urbana, Ill.
91 *Studies on Water Drinking; Hydrogen Ion Concentration of Feces. P. E. Howe and P. B. Hawk, Urbana, Ill.
92 Carbohydrate Esters of Higher Fatty Acids; Manite Esters of Stearic Acid. W. R. Bloor, St. Louis.
93 Protein Metabolism from Standpoint of Blood and Tissue Analysis; Origin and Significance of Ammonia in Portal Blood. O. Folin and W. Denis, Boston.

90. **Elimination of Nitrogen During Fasting.**—The subject of the fast reported by the authors was a Scotch collie dog weighing 26.33 kg. at the opening of the fast. The fast was 117 days in length, thus constituting by many days the longest fast on record. The dog gave evidence of being possessed of wonderful vigor and stamina. This was indicated by the fact that he was able to jump out of his cage so late as the one hundred and first fasting day. At the end of the fast of 117 days the animal was carefully fed and ultimately brought back to his original body weight and subjected to a second fast. The data from this second fast will soon be published. The urine of the animal was examined quantitatively for total nitrogen, urea, ammonia, creatinin, creatin, allantoin and purin-nitrogen. The total nitrogen content of the feces was also determined. During the prefasting interval, the dog was fed a diet containing 3.75 grams of protein per kilogram body weight. He also received 700 c.c. of water per day during the feeding interval as well as during the fast. The body weight loss aggregated about 63 per cent. for the 117-day fast, the actual weight being 26.33 kg. before the fast and 9.76 kg. on the one hundred and seventeenth day. There was no indication of a premortal rise in the nitrogen excretion.

The "creatin crossing," i. e., the point in a fast at which the output of nitrogen in the form of creatin exceeds that in the form of creatinin, was not in evidence. This fact is interpreted as indicating that the dog would probably have been able to fast a total of at least 130 days if he had not been fed on the one hundred and seventeenth day. At the end of the fifty-ninth fasting day, the water ingestion of the dog was raised to 2,100 c.c. per day for an interval of four days. This caused an increase of 77.5 per cent. in the total nitrogen output for the first day, urea, ammonia, creatinin, creatin and allantoin being simultaneously increased, whereas purin was decreased in quantity. The creatinin coefficient was 15.6 for the period of normal feeding preceding the fast, 12.0 at the opening of the fast and 4.7 on the one hundred and seventeenth fasting day. The percentage nitrogen distribution was in general similar to that reported in connection with the shorter fasts on dogs.

91. **Hydrogen Ion Concentration of Feces.**—The hydrogen *ion* concentration of the feces of three men was determined by Howe and Hawk, two in a series of water-drinking experiments and the third in a fasting test, with the accompanying preliminary and final periods. The same type of diet was employed in the water experiments and in the preliminary post-fasting periods of the fasting test. The hydrogen electrode (Salm type) was used to determine the actual hydrogen *ion* concentration, and indicator papers were used to determine the approximate hydrogen *ion* concentration. The reaction of the feces was uniformly alkaline, the hydrogen *ion* concentration varying between 0.15×10^{-8} and 9.8×10^{-8}. As the result of water drinking with meals, there was a tendency for the hydrogen *ion* concentration to increase. Pronounced changes in the dietary régime, such as high protein, low protein and fasting, did not affect the hydrogen *ion* concentration of the feces sufficiently to cause other than small variations in the uniformly alkaline reaction. As the result of fasting, the stools were alkaline in reaction (hydrogen *ion* concentrations of 1.4×10^{-8} and 0.94×10^{-8}), as opposed to the acid stools reported by previous investigators. The hydrogen *ion* concentration differs for the feces of different individuals living on the same diet.

Northwest Medicine, Seattle, Wash.

March, IV, No. 3, pp. 69-100

94 Paranoia. D. H. Calder, Provo, Utah.
95 Cholecystectomy; Experimental Study. J. E. Else, Pullman, Wash.
96 Cholelithiasis; Report of Cases. G. N. Pease, Portland, Ore.
97 Basic Principles in Treatment of Specific Urethritis. A. C. Crookall, Seattle, Wash.
98 Infantile Pernicious Vomiting and Rectal Hemorrhage; Report of Case. A. Ries-Finley, Ogden, Utah.
99 Open Treatment of Fractures. W. C. Woodward, Seattle, Wash.
100 Congenital Idiopathic Dilatation of Colon; Hirschsprung's Disease. J. F. Critchlow, Salt Lake City, Utah.
101 Ophthalmologic Study in Paris. F. A. Kiehle, Portland, Ore.

Chicago Medical Recorder

March, XXXIV, No. 3, pp. 115-174

102 *Milk as Food for Infants. I. A. Abt, Chicago.
103 Relation of Community to Midwife. W. H. Allport, Chicago.
104 Condition of Surgery of Head at Cook County Hospital in Ninth Decade of Nineteenth Century. B. Holmes, Chicago.
105 Orthopedic Treatment of Non-Tuberculous Chronic Joint Diseases. J. Ridlon, Chicago.
106 Mental Therapeutics. O. J. Price, Chicago.
107 Vaginal Douche Therapy. F. A. Brockmyre, Canandaigua, N. Y.
108 Red Cross Work in Hankow, China. W. W. Peters.

102. **Milk as Food for Infants.**—Abt sums up his views as follows: In order to feed an infant successfully one must have a definite knowledge as to the status of the infant, his digestive function and his constitutional state. A knowledge of the physiology of food, the injuries produced by food and the tolerance for food is requisite. Overfeeding is as disastrous as

underfeeding. An excess of fat or sugar is capable of producing toxic symptoms. Simple milk mixtures, that is, milk diluted with water or cereal decoction, with the addition of 1 to 5 per cent. of sugar, will in most cases give satisfactory results. Elaborate and complicated milk formulæ are not ordinarily required. The technic of feeding consists of careful preparation and proper administration of the food. These are not the least important elements in successful feeding. In feeding sick infants it is frequently possible to ascertain which element of food in the milk mixture is producing harm, and the proper modification may be made. Some children have an idiosynerasy against cow's milk, as evidenced by the production of toxic symptoms. In such cases breast milk or a suitable adaptation of cow's milk should be instituted. Every baby, especially every abnormal baby, is a law unto himself, and he should be studied as an individual. No one's dictum or rule or recent discovery is as important as a knowledge of general principles of feeding and the physiology of food and digestion. Prolonged starvation lowers resistance and predisposes to disease and death. Prolonged and excessive use of laxative drugs does not assist in the digestion or assimilation of food. Scalded or boiled milk sometimes agrees when raw milk causes indigestion and diarrhea. An infant may be difficult to feed because he is suffering from an inherited disease, an anatomic malformation, a constitutional vice or an infectious disease. Fresh air, intelligent care, good housing conditions, frequent bathing and cleanliness, proper clothing for summer and winter, are powerful adjuvants in all that pertains to normal digestion and the upbuilding processes of infants.

Delaware State Medical Journal, Wilmington

March, III, No. 4, pp. 1-26

109 Hysteria. T. H. Davies, Farnhurst.
110 Typho-Bacterin. W. Marshall, Milford.

Journal of Ophthalmology and Oto-Laryngology, Chicago

March, VI, No. 3, pp. 70-104

111 Intra-Orbital Lesions Secondary to Disease of Accessory Sinuses of Nose. J. W. Walters, Lynchburg, Va.
112 Non-Suppurative Sinusitis. A. H. Andrews, Chicago.

New York Medical Journal

March 23, XCV, No. 12, pp. 573-624

113 Personal Experience with Diseases of Pancreas. J. B. Deaver, Philadelphia.
114 Progress in Sanitary and Moral Prophylaxis. P. A. Morrow, New York.
115 Some Reasons Why Incipient Pulmonary Tuberculosis Is Not Diagnosticated. J. H. Pryor, Buffalo.
116 *Plastic Roentgenography. W. H. Diefenbach, New York.
117 Case of Quadruple Infestation and Ameba in Stools of Apparently Healthy Individuals. R. C. Rosenberger, Philadelphia.
118 *Preparation and Use of Thrombokinase. L. W. Strong, New York.
119 Secret Division of Fees. R. E. Coughlin, New York.
120 Extension of Registration Area. H. A. Brown, Washington, D. C.
121 Dowd Phosphatic Index in Relation to Disease of Eye. J. C. Clemesha, Buffalo.

116. **Plastic Roentgenography.**—In Diefenbach's method the plate is developed, fixed, washed and dried in the usual manner, excess of contrast in development being avoided. A positive is next made from the negative plate, using a slow plate and exposing carefully. Fogging is avoided and the attempt is always made to secure equal density. Both plates, when dry, have their glass surfaces carefully cleaned and these are then placed together, making the outlines register accurately by holding them up to a good north light. When good approximation has been secured, the plates are firmly bound together with lantern-slide binders. These joined plates are now placed in the printing frame, using the positive side to print from, and employing a slow bromid glossy paper (carbo and portrait argo). Exposure is regulated according to the character of the light, the frame being placed at an angle of 45 degrees in a north light. The paper is next developed in an antifriction developer, rinsed, fixed in a fresh hypo bath, and when washed is ready for mounting. The prints are said to demonstrate the existence of calculi and to show details of shape and structure better than can be seen stereoscopically or otherwise, and they make diagnosis of these lesions easier, particularly for such physicians as have not had much training or experience in the interpretation of Roentgen shadows.

118. **Thrombokinase.**—The idea that the tissue juices might furnish a body which would hasten clotting, and that this might be of more service than fresh blood serum in the control of hemorrhage, led Strong to follow the method of Batelli, leaving the question of its nature as a ferment for later consideration. The technic as modified by him is as follows:

Sheep's lungs are taken direct into sterile towels, and the larger bronchi are removed to avoid as many bacteria as possible. The lungs are then ground in a meat grinder and soaked in twice their volume of sterile water for an hour; 1.5 c.c. glacial acetic acid for every litre of extract is then added, drop by drop, with constant stirring. A white flocculent precipitate results, which is immediately collected by centrifuging. The free acetic acid is removed by washing thoroughly with salt solution. The centrifuge tubes are then filled with alcohol and the mixture is again centrifuged thoroughly, when the alcohol may be decanted and the nearly dry precipitate may be spread on crystallizing dishes and rapidly evaporated at a low temperature in vacuo. Dryness will be secured within twelve hours. Scrape off the resultant brownish powder and seal in sterile tubes. Test sterility by several plants in bouillon for forty-eight hours. Several preliminary tests showed that rabbit's blood in test tubes containing a few flakes of the powder, clotted more rapidly than blood alone. Tests show that the powder contains a body which in the moist state is inactivated at 70 C. for thirty minutes.

It is this evidence of a ferment body which leads to the use of the term thrombokinase for the powder.

Similar preparations were made from spleen, liver, bone marrow, endocardium and aorta. Parenchymatous organs, however, have too much nucleoproteid for practical uses. Experimentally, these did not work as well as preparations from the lung. Acetone was also used as a dehydrating agent, but it appears to injure the ferment. The powder is said to have been used clinically with success by many operators in nose and throat work.

Ohio State Medical Journal, Columbus

March, VIII, No. 3, pp. 109-170

122 Kidney Function in Surgery, with Particular Reference to Kidney Surgery. L. E. Schmidt, Chicago.
123 Some Experiences in Kidney Surgery. C. A. Hamann, Cleveland.
124 Interstitial Nephritis as It Concerns Urologist. M. B. McGonigle, Toledo.
125 Value of Drugs in Heart Diseases. H. R. Blakey, Columbus.
126 Eclampsia Without Convulsions (?): Post Mortem Cesarean Section. E. W. Mitchell, Cincinnati.
127 Heredo or Congenital Syphilis. J. J. Thomas, Cleveland.
128 Pregnancy at Seventh Month Complicated by Obstruction of Bowels. M. A. Tate, Cincinnati.
129 Heart Syphilis. A. S. Warthin, Ann Arbor, Mich.

Medical Record, New York

March 30, LXXXI, No. 13, pp. 601-650

130 General Practitioner in Development of Appendicitis Management. S. Baruch, New York.
131 *So-Called Parasite of Yellow Fever (Seidelin). A. Agramonte, Havana, Cuba.
132 Karell Kur. F. F. Ward, New York.
133 Gonorrhea; Its Prevention and Cure by Autotherapy. C. H. Duncan, New York.
134 Some Individualized Aspects of Preventive Medicine. H. W. Wright, New York.
135 When Cystitis Is Not Cystitis. J. B. Clark, New York.
136 Abortive Typhoid, with Report of Case. H. W. Lincoln, Brooklyn.

131. **Parasite of Yellow Fever.**—The supposed value of Seidelin's findings and the correctness of his observations is very seriously doubted by Agramonte. He states concisely his reasons why the bodies described by Seidelin were not at all convincing to him of their parasitic nature. The preparations stained by the Giemsa stain, had been very poorly treated. So much so, that the leukocytes had not taken their due coloring, many eosinophilic cells remaining unstained while others were intensely so, showing evidently a faulty technic and therefore unreliable results. Seidelin's supposed parasite is present in very limited numbers in each blood drop, not more than three or four, all unlike, in each preparation, and we know that infective blood, in yellow fever, must contain a great number of parasites if the amount necessary for infection is to be a criterion. Experiments have demonstrated that yellow fever blood is not infective after the third or fourth day, while Seidelin's bodies have not been observed by him except from the fourth to the eighth. There is no reason to believe that the parasite of any infectious disease may be demonstrated in

the blood at any period when this blood is not infective. If the bodies shown by Seidelin were evolution forms of an animal parasite, as he claims, we would find several of them at least in the same period of their evolution in the same smear, and they would therefore present the same morphological characters, while as it is, it is not possible to find two bodies alike in the same preparation, except in the liver section, in which they are all four inside a cell. There is no analogy, as Seidelin admits, between the supposed parasites and other organisms found in the blood of man or animals. Finally, Agramonte finds it impossible to form an opinion that will carry weight founded on smears stained in such imperfect manner and with such an unstable reagent as the Giemsa stain, and less so when the various characters of form and size presented by the Seidelin bodies are such that they ought to be readily observed in fresh preparations of blood in which it would be easier to differentiate them from platelets and protoplasmic and nuclear cell fragments.

Yale Medical Journal, New Haven, Conn.

February, XVIII, No. 6, pp. 249-288

137 Diverticulitis of Colon. J. F. Erdmann, New York.
138 Treatment of Eclampsia. H. K. Thoms, New London, Conn.
139 Treatment of Epilepsy. D. L. Ross, Mansfield Depot, Conn.

Journal of Kansas Medical Society, Kansas City

March, XII, No. 3, pp. 81-120

140 Acute Pancreatitis and Subacute Pancreatitis. G. M. Gray, Kansas City.
141 Treatment of Typhoid. C. F. Cronk, Anthony.
142 Fissure in Ano. W. W. Yates, Topeka.
143 Hyperchlorhydria; Diagnosis and Treatment. W. C. Lathrop, Norton.

Boston Medical and Surgical Journal

March 28, CLXVI, No. 13, pp. 475-510

144 *Masquerades of Chronic Cholelithiasis. A. E. Austin, New York.
145 Geographic Distribution of Insanity in Massachusetts, 1901-1910. E. E. Southard, Cambridge, Mass.
146 Suturing as Substitute for Splints After Submucous Resection of Nasal Septum. O. A. Lothrop, Boston.
147 Psychopathic Nursing. B. T. Ring, Arlington Heights, Mass.
148 Warning in Regard to Intratracheal Insufflation Anesthesia; Necessity of Safety Valve. F. J. Cotton and W. M. Boothby, Boston.
149 *Method for Detecting Bile in Stomach Contents. H. W. Goodall, Boston.

144. Masquerades of Chronic Cholelithiasis.—Apart from the fact that cholelithiasis often simulates a gastric or intestinal disease Austin points out the gall-stones produce certain reflex activities on the part of the stomach which may be so prominent that they obscure the actual disease; in other words, the symptoms on the part of the stomach are functional while those on the part of the gall-bladder and ducts are real; that is, due to the stone or septic invasion from the intestine. Thus the physician is liable to fall into two errors; he may accept cholelithiasis as the cause of the difficulties from which the patient suffers, and from the frequency of gall-stones at any age beyond forty an operation will prove their presence, but after their removal the patient does not fully recover; in other words, the stones were quiescent and there was some other cause for his patient's symptoms, or he may regard these erratic manifestations of gall-stone disease as due to something else and treatment directed to overcome that mistaken condition will be futile.

149. Detecting Bile in Stomach Contents.—The following method, based on the oxidization of bilirubin with nitric acid, forming green biliverdin, is recommended by Goodall as being delicate and easy of application. Half a test-tube of the fluid portion of the stomach content is taken. If this amount cannot be obtained, or if the contents consist largely of solid material, it should be diluted with water thoroughly mixed and the fluid portion poured off or filtered. The fluid is then saturated by shaking one or two minutes with ammonium sulphate crystals, or, better, crystals which have been ground into a fine powder. About an inch in the bottom of the test-tube is usually sufficient. Then from 1 to 3 c.c. of acetone (about a quarter of an inch in the test-tube) is added, and the whole thoroughly mixed by inverting the test-tube five or six times. It is best not to shake. After standing a minute or two the acetone rises to the surface of the fluid, carrying bile pigment up with it. A drop of yellow nitric acid is allowed to run down the side of the test-tube and the green reaction occurs in the acetone layer. Goodall urges that care should be taken in adding the acid, as too large quantities produce too rapid an oxidization and the green quickly passes over into a purple or reddish color. If the acetone does not promptly rise to the surface the liquid has not been thoroughly saturated with ammonium sulphate. If too much acetone is added, the bile may be diluted to such a degree that the reaction is not distinct. This procedure is said to be delicate enough to demonstrate bile in contents which microscopically do not suggest its presence.

Lancet-Clinic, Cincinnati

March 16, CVII, No. 11, pp. 289-314

150 Relation of Medical Colleges Toward Each Other and Medical Education in General. W. J. Means, Columbus, Ohio.
151 Experimental Obstruction and Hormone-Therapy. L. K. Hirshberg, Baltimore.
152 Concerning Digitalis. F. Tice, Chicago.
153 Test for Renal Function. W. S. Ehrich, Evansville, Ind.
154 Prevention of Venereal Disease. W. F. Waugh, Chicago.

March 23, CVII, No. 12, pp. 315-342

155 Pathologic Physiology of Tuberculosis. C. S. Rockhill, Cincinnati.
156 Importance of Analysis of Symptoms in Pulmonary Tuberculosis. S. von Ruck, Asheville, N. C.
157 Conservative Treatment of Surgical Tuberculosis. J. V. Reed, Indianapolis, Ind.
158 Present Status of Antisyphilitic Treatment. P. F. Shaffner, Chicago.

Journal of Iowa State Medical Society, Clinton

March, I, No. 9, pp. 461-524

159 Classification, Management, Education and Medical Treatment of Feeble-Minded. M. Bannister, Ottumwa.
160 Symptomatology and Treatment of Early Tubal Pregnancy. M. Emmert, Atlantic.
161 Medicolegal Aspect of Traumatic Neuroses. F. A. Ely, Des Moines.
162 Salvarsan as Drug. R. A. Weston, Des Moines.
163 Conservative Nasal Surgery. F. W. Bailey, Cedar Rapids.
164 Diagnosis in Obstetrics. H. R. Reynolds, Clinton.
165 Surgical Treatment of Acute Articular Rheumatism. A. M. Pond, Dubuque.
166 Small-Pox Epidemic in Jefferson County, Iowa. P. J. Sherlock, Lockridge.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

March 16, I, No. 4620, pp. 705-770

1 Paratyphoid Fever and Meat Poisoning. F. A. Bainbridge.
2 Derangements of Knee Following Strains and Blows. A. E. Barker.
3 Hypersensitiveness: Parallelism in Phenomenon of Hypersensitiveness and Certain Clinical Manifestations of Obscure Nature. H. B. Shaw.
4 Bed Isolation of Cases of Infectious Disease. C. Rundle and A. H. G. Burton.
5 *Case of Surgical Emphysema During Labor. M. Stocks.
6 *Case of Meningitis in Which Bacillus Coli Communis Was Obtained from Cerebrospinal Fluid. G. H. Pearson.

5. Surgical Emphysema During Labor.—The emphysema in Stocks' case occurred in the face during the first stage of labor. This swelling increased and was accompanied by cyanosis during the pains. The crackling sensation of subcutaneous emphysema was found present over the swollen area, extending over the neck and right side of the face; the right palpebral fissure was reduced to a slit. Forceps were applied and the patient was delivered of a living child. Within about seven hours the emphysema was found present over an area including both sides of the neck, both sides of the face up to the orbital ridges, the whole of the right side of the thorax limited by the costal margin below, the spine behind and the sternum in front; the right upper arm to the extent of a third, and the left shoulder. Apart from some pain in the chest and at the back of the neck, of which complaint was made, the patient appeared to be little the worse. She made a good recovery, the whole of the swelling having disappeared at the end of eight days.

6. Case of Meningitis.—In Pearson's case lumbar puncture was performed on a girl, 3 months old, under strict aseptic precautions and a turbid fluid, not under tension, was withdrawn. On examination four hours later the fluid showed

V. 58 1912

numerous bacilli, extra- and intracellular and a large number of polynuclear neutrophils. A white count the same day as the puncture was done showed the number to be 16,000 per cubic millimeter. The child died six days after admission, and at the post-mortem examination the diagnosis of septic meningitis was proved to be correct. The brain was entirely covered, more especially the anterior two-thirds, with purulent and offensive pus. There was no localization of pus at any point. The ventricles were dilated and full of pus, which also surrounded the cord, especially between the cervical and lumbar enlargements. The left middle ear was full of pus, while the right was healthy and dry. No thrombosed vein or caries of bone was found. During life no symptoms of middle-ear mischief had been present. The bacillus, which was remarkably plentiful in the cerebrospinal fluid, had all the morphologic and cultural characteristics typical of the colon bacillus.

British Medical Journal, London

March 16, I, No. 2672, pp. 589-652

7 *Serum and Vaccine Therapy in Connection with Diseases of Eye. C. W. G. Bryan.
8 Cases Illustrating Some Intracranial Conditions. S. Lodge.
9 Experiences with Spinal Analgesia in 2,354 Cases. A. E. Barker.
10 Subdural Abscess, Thrombosis of Lateral Sinus and Diffuse Osteomyelitis of Skull Bones Treated with Vaccines; Recovery. T. H. Butler.
11 Nasal Obstruction Due to Osteomata of Posterior Nares. F. P. Sturm.
12 *Arthritis. J. R. Collins.
13 Case of Vegetable (Cocoanut Hairs) Gastrolith. P. S. Hichens and N. B. Odgers.
14 *Boracic Acid Poisoning. J. H. Sanders.

7. **Serum and Vaccine Therapy in Eye Diseases.**—In internal tuberculosis of the eye, Bryan says the results of treatment by vaccine are good, especially where the iris is the diseased tissue. The iris is favorable for treatment because it has a good blood-supply. In tuberculosis of the fundus, where the blood and lymph-supply are poor, treatment has to be prolonged, and is less certainly successful. It is mentioned that in disease of the iris it is necessary to use mydriatics to prevent the formation of synechiæ, and, the blood-supply in this way being diminished, treatment rather tends to be prolonged, owing to the difficulty of getting sufficient opsonins into the diseased tissues.

12. **Arthritis.**—Collins' view is that the vast majority of all cases of arthritis are due to the action of a microorganism, that different microorganisms are capable of producing lesions which are clinically identical, and that, regarding the body as a tuber, the infection is caused by an entry being effected through some part of the surface of the tube by a microorganism not necessarily dissimilar to the ordinary bacterial flora of that region of the body. Diathesis he does not ignore, but interprets that term, prolific in faction, as meaning the constitutional proneness of an individual for a particular infection, in other words, his suitability as a culture medium is fully appreciated by workers in bacteriology. An abnormal deficiency in bacteriotropic substances would also as a constitutional peculiarity be included under diathesis. Collins is firmly convinced that every case of "rheumatoid" arthritis is due to a microbic infection; and, he says the more closely early cases of so-called rheumatoid arthritis are investigated the larger will be found the proportion of those in which a definite infection can be traced. If no local site of infection can be detected, the blood ought to be cultured. Such patients if treated with sodium salicylate, guaiacol carbonate, or hydrotherapy in all its branches, degenerate into the forms of joint deformity, which have for years been the subject of treatises on acute rheumatism, chronic rheumatism, rheumatoid arthritis, osteo-arthritis, arthritis deformans, etc.

14. **Boracic Acid Poisoning.**—A man, aged 23 years, had been ill with dysentery on and off for ten months. Sanders frequently searched for amebas, but could not find any. On admission (July 5) he was put on a mixture of magnesium and sodium sulphate, ½ ounce every four hours. After two days he had a single rectal wash of boric acid and warm water to ease the straining. At this time he was passing ten to thirteen stools daily, consisting of almost pure blood-stained mucus. On July 8 he was put on tinctura opii, ♏ xxx, pulvis ipecacuanhæ, gr. xxx, diminishng the dose each day. On July 16 (the tenth day) as he had not improved he was put back on the magnesium and sodium sulphate solution, and in addition a rectal wash of boric acid (saturated solution) and water, ½ pint each, was given night and morning. This immediately lessened the number of stools, and the wash was continued as long as Sanders found mucus. This treatment was continued for over three weeks, and the patient was rapidly improving, taking his food well, and up and about; on the day before the onset of the symptoms of poisoning he only passed two stools in addition to the rectal washes.

August 9 the patient was up and about, was taking his food well, and there was no elevation of temperature. On the morning of August 10, Sanders found him in bed with a rash covering the whole body, very like a bromid rash, generally scattered, but on the extensor surfaces the papules were gathered more thickly, erythematous in character, disappearing on pressure, not at first hard, although each papule could be distinguished. He at once recognized it as a drug rash, and ordered the rectal injections to be discontinued and only plain water to be used. In the afternoon of the same day he became very restless and inclined to be noisy, so much so that later in the day he was put into a separate ward. On the next day he was more thickly covered, especially on the extensor surfaces and the face, and the spots were more shotty and hard, with a tendency to become purpuric. He was quite delirious, and the pulse very feeble; he could not sleep, and a dose of paraldehyd had no effect. On the morning of August 12 the rash was quite purpuric with hard, shotty papules; he was quieter through weakness. He slept after a dose of chloral and later took some food. Next day the spots were becoming clearer, but still hard and shotty. His mind was quite clear and he was taking food well. He continued to improve, but on the morning of August 14 the eyelids were very puffy. There was no albumin in the urine. On August 18 the spots were scaling, but still hard generally; in a few places a little serum escaped and in others pus, evidently due to infection by scratching with his nails. By August 20 the color of the rash had faded considerably, but the papules were still hard and shotty. The general health of the patient was better. After a few days' rest at home he was able to return to his work.

This case illustrates the sudden onset of symptoms without any warning. It shows also the long duration of the rash after all drugs had been stopped, the delirium that accompanied the poisoning, the weakness of the pulse and danger to life if not recognized at once and stopped.

Edinburgh Medical Journal

March, VIII, No. 3, pp. 193-288

15 Numan, the Veterinarian and Comparative Anatomist of Utrecht. D. B. Hart.
16 Amebic Dysentery in Man Who Has Never Been Out of Scotland. D. G. Marshall.
17 Trauma as Factor in Disease. A. James.

Journal of Obstetrics and Gynecology of British Empire, London

January, XXI, No. 1, pp. 1-64

18 *Relative Size of Uterus in Cases of Hydatid Mole. H. Briggs.
19 Fat and Fat Crystals in Ovary. J. S. Young.
20 Pyosalpinx Successfully Removed by Abdominal Section During Puerperium. J. H. Ferguson.
21 *Lipectomy as Cure for Adiposity and Menstrual Irregularity. G. A. Casalis.

18. **Size of Uterus in Hydatid Mole.**—Briggs asserts that undersize, and not oversize, of the uterus is the more prevalent disproportion in cases of hydatid mole and cites twenty-three cases. In seventeen cases the uterus was undersize; in five oversize and in one case it was of normal size.

21. **Adiposity and Menstrual Irregularity.**—Lipectomy is regarded by Casalis as being indicated in young women whenever an excessive deposit of fat on the abdomen interferes with the menstrual function and leads to amenorrhea, especially when the latter condition is not amenable to other therapeutic agents. From a purely esthetic point of view, it is a highly satisfactory operation. It is devoid of danger, and would appear in some well-defined cases to increase tissue metabolism and restore ovarian activity

Clinical Journal, London

February 28, XXXIX, No. 21, pp. 321-336

22 *Hypothyroidism. H. French.
23 Extraperitoneal Rupture of Bladder Without Fracture of Pelvis. H. B. Robinson.

March 6, XXXIX, No. 22, pp. 337-352

24 Syphilis of Brain. W. P. Herringham.
25 Unusual Hemorrhages at Puberty and Menopause. T. G Stevens.
26 Retrograde Enteric Intussusception. L. A. Dunn.

March 13, XXXIX, No. 23, pp. 353-368

27 Pulmonary Tuberculosis and Notification. H. B. Shaw.
28 Syphilitic Disease of Spinal Cord. W. P. Herringham.

22. **Hypothyroidism.**—It is held by French that there is clinical if not experimental evidence to show that between normal people, on the one hand, and myxedematous or cretinoid persons on the other, there is a wide field within which come cases in which more or less severe symptoms may be attributed to what he calls hypothyroidism; that is to say, deficient activity of the thyroid gland, but not complete absence of its secretion. Of the many groups into which these cases might be divided, in all of which some at least of the patients are materially benefited by the administration of suitable doses of thyroid extract are the following: (1) The infantile idiot type. (2) Children backward in walking or in talking. (3) Backward boys or girls, especially some suffering from nocturnal enuresis. (4) Stout sterile women of child-bearing age. (5) Women who tend to become very stout at or about menopause. (6) Certain sufferers from functional nerve symptoms, notably exaggerated subjective sensations of acroparesthesia and the like after the menopause, and most particularly one type of that little understood but very severe malady, tic douloureux.

Medical Press and Circular, London

February 28, XCIII, No. 3799, pp. 211-236

29 *Treatment of Injured and Displaced Semilunar Cartilages in Knee. R. H. A. Whitelocke.
30 Methods of Operation in Tumors of Urinary Bladder. A. Fullerton.
31 Palpitation. J. M. Cowan.
32 Rôle and Methods of Psychotherapy in Psychasthenia Predisposing to Inebriety. T. A. Williams.

March 6, XCIII, No. 3800, pp. 237-264

33 Mode of Thought in Insane. T. C. Shaw.
34 Important Phases in Evolution of Man. A. Keith.
35 Ranula. A. Kermisson.
36 Unrecognized Diphtheria. S. Taylor.

March 13, XCIII, No. 3801, pp. 265-290

37 Diagnosis and Treatment of Cerebral Hemorrhage. F. X. Callaghan.
38 Important Phases in Evolution of Man. A. Keith.
39 Leprosy and Public. P. S. Abraham.
40 Nervous Disorders and Neurologist in Relation to Profession and Public. T. A. Williams.

29. **Injured and Displaced Semilunar Cartilages in Knee.**—A method of reposition of the cartilage practiced by Whitelocke based on anatomic principles, is suitable for long-standing as well as recent cases, and he says seldom fails when properly executed. The patient's clothing having been sufficiently removed, let him lie flat on his back. Standing on the outer side of the affected limb, flex the leg on the thigh and the thigh on the trunk as much as possible; at the same time adduct the limb until the flexed knee comes to lie across the middle line of the body at the navel. With the limb in this position all the ligaments and tendons are slackened. Take hold of the ankle with one hand and grasp the knee with the other to steady it. With the hand on the ankle, abduct the tibia from the femoral condyle, so as to open the space as widely as possible, then with the leg used as the long arm of a lever work it to and fro with slight movements of rotation until the cartilage is felt to slip back, the patient experiences relief, and the knee becomes capable of full extension. When the external cartilage is at fault, the abduction of the tibia must be from the external femoral condyle and the rotation in the opposite direction.

Whitelocke has never known the maneuver to fail in a recent case, and has succeeded with cases of many months' standing without an anesthetic. When inflammatory changes have supervened an anesthetic is useful, as it allows of a more thorough examination and differential diagnosis. When it is impossible to replace the cartilage by manipulation with an anesthetic, and this is rare, it is safest to open the joint, for it will usually be found that a loose body or hypertrophied fringe, or some such complication, exists in addition. As soon as the cartilage is replaced, steps should be taken to limit the effusion into the joint. The patient is best confined to bed or sofa, and prevented from walking. With intermittent pressure the effusion should all disappear in a week or less time. Massage and passive movements are not recommended until the fluid is gone.

Annals of Tropical Medicine and Parasitology, Liverpool

February 26, V, No. 4, pp. 501-543

41 Some Blood-Parasites in Man and Mammals. H. Seidelin.
42 Genus Pristirhynchomyia, Brunetti, 1910. W. S. Patton and F. W. Cragg.
43 Life History of Philaematomyia Insignis, Austen. W. S. Patton and F. W. Cragg.
44 Measurements of a Thousand Examples of Trypanosoma Vivax. B. Blacklock.
45 Enumerative Studies on T. Brucei in Rats and Guinea-Pigs; Comparison with T. Rhodesiense and T. Gambiense. J. G. Thomson.
46 Measurements of Trypanosoma Vivax in Rabbits and White Rats. B. Blacklock.
47 *Case of Malarial Fever, Showing True Parasitic Relapse, During Vigorous and Continuous Quinin Treatment. R. Ross and D. Thomson.

47. **Malaria Fever.**—The author's patient, a sailor, had a slight attack of malarial fever in 1905, but it did not trouble him much. In June, 1911, he got an attack of fever and was very ill. He was getting quinin thrice daily all the time. After this he remained well for two months, during which period he had quinin only once in awhile. He had a second attack of fever in September, but this attack was not quite so severe. October, 1911, he had fever, and the blood examination revealed a mixed infection of benign and malignant tertian malaria. A few crescents were present (about 16 per c.mm.). The blood showed marked auto-agglutination of the red cells and nucleated and stippled basic red cells were numerous. The hemoglobin was only 40 per cent. There was no appreciable enlargement of the liver or spleen. The patient was very weak and somewhat emaciated, and had a tendency to be slightly delirious and incoherent in his speech. Quinin hydrobromid, in liquid form, was administered in doses of 10 grains, thrice daily, by mouth. This reduced the asexual parasites to below the detectable limit in thin films, in five days; that is, about two days longer than usual. This dosage of quinin was continued for seventeen days, during which period the temperature remained normal.

On November 10, a rise of temperature having been noticed, the blood was examined rapidly and no parasites were observed. Thinking that the temperature was one of those pseudorelapses noticed to occur before, during quinin treatment, they stopped the administration of quinin for a few days. As the temperature, however, persisted and showed a true malarial type, the blood was again examined carefully. Asexual parasites, malignant and benign, were found, and, moreover, crescents began to appear. Quinin was again given, as before, and the patient by this time was very ill and slightly delirious, and seemed to have difficulty in articulation. He commenced to pass his urine involuntarily. On November 21, the fever showed no signs of abating, and on the 22d, therefore, 30 grains of quinin bihydrochlorid were injected intramuscularly, in addition to the usual 30 grains of quinin hydrobromid given by mouth. In addition to this, 12 grains of methylene-blue were given daily in pill form. This combined treatment reduced the asexual parasites below the detectable limit in three days, and the crescents were reduced to twenty per c.mm. in fourteen days. The patient improved very rapidly, and was no longer confined to bed after December 10. On December 12 the methylene-blue was stopped and the quinin reduced to 20 grains daily. He left the hospital on December 20.

On the supposition that the quinin may not have been properly absorbed from the digestive tract, a twenty-four-hour specimen of the urine was examined to estimate the quantity of quinin excreted. It was found to contain 16 grains. The

V. 58
1912

patient was, therefore, excreting 13 grains daily out of the 30 grains administered daily by the mouth. This is about the usual amount and showed that the quinin administered was being efficiently absorbed. Therefore this case of malaria (mixed infection) showed a most unusual resistance to thorough and continuous quinin treatment.

Malaya Medical Journal, Singapore

January, X, No. 1, pp. 1-49

48 Ankylostomiasis Among Tamil Coolies. T. S. Macaulay.
49 Muride and Spalacide.
50 Parasites of Rat. A. E. Shipley.
51 Examination of Rats for Plague. H. B. Newham.

Archives Générales de Chirurgie, Paris

February, VI, No. 2, pp. 125-248

52 *Congenital Dislocation of the Hip-Joint. (La luxation congénitale de la hanche.) P. Le Damany.
53 *Hypertrophy of the Thymus. (Le traitement chirurgical de l'hypertrophie du thymus. Ses avantages, sa technique, ses résultats.) E. Olivier.
54 *Section of Posterior Spinal Nerve Roots. (L'opération de Foerster.) L. Delrez.
55 *Acute Cholecystitis in Course of Typhoid. G. Worms and A. Hamant.

52. Congenital Dislocation of the Hip Joint.—Le Damany explains the anthropologic factors which induce this deformity, a knowledge of which is essential for successful treatment.

53. Hypertrophy of the Thymus.—Olivier has been making a special study of hypertrophy of the thymus during the last three years, and the results confirm anew, he says, that operative treatment is the only reliable preventive and curative measure that can be applied in these cases. Thymectomy is safer and gives better results than roentgenotherapy, resection of the manubrium or fixation of the thymus to relieve disturbances from it. The organ can be easily shelled out from its capsule; any attempts to remove the latter are liable to fail. General anesthesia is particularly useful, but also particularly dangerous, and precautions should be redoubled in these cases. In his eleven cases the children bore the subtotal subcapsular thymectomy without trouble, but there are fifteen deaths recorded among the forty-two thymectomies that have been published. In seven cases the operation had nothing to do with the fatality, but in the other eight cases death was the result of a secondary tracheotomy. To do a tracheotomy after thymectomy invites infection, and Olivier refuses to do it as a rule, although Rehn, König and Jackson were each able to save a patient by this means. Children are so restless that infection is certain also, he thinks, if the wound is drained. In four of the fifteen fatal cases there were diseased tracheobronchial glands; this evidently enhances the danger of operative measures. Sifting the cases, therefore, demonstrates that the thymectomy itself was not responsible for any of the deaths. On the other hand, it put an end at once to the tendency to suffocation in all but two cases and to the stridor in 75 per cent. All the children began to thrive at once.

54. Section of the Posterior Spinal Roots.—Delrez modified Foerster's technic in a recent case of spastic paraplegia in a man of 39, severing only the nerve fibers involved instead of the whole root. The operation put an end at once to all the contracture, and the patient slowly regained the use of his limbs. In the fifty-two cases of spastic affections in which the method has been applied to date, in twenty-three of the thirty-one cases of Little's disease the results were excellent; four of the group died and in four others there was no benefit or it was only transient. He tabulates the details of these fifty-two cases, and reviews also the cases of tabetic gastric crises in which the method has been applied with complete success in ten cases, no benefit in eight, and death in two cases.

55. Typhoid Cholecystitis.—In one of the two cases reported the cholecystitis was almost the first symptom of the typhoid. The history of this complication is reviewed, and the better results extolled as surgical treatment has been more frequently applied. Mere incision of the gall-bladder and suturing it to the skin is generally sufficient. A fistula may be left, but this can be corrected later when the patient is able to stand further intervention.

Archives Générales de Médecine, Paris

February, XCI, No. 2, pp. 161-188

56 Regional Tuberculosis Responsible for Tuberculosis Later in the Army. (Influence du pays d'origine des recrues sur le développement de la tuberculose dans l'armée.) G. H. Lemoine.
57 Intratracheal Injections in Treatment of Pulmonary Disease. (L'injection intratrachéale transglottique.) G. Rosenthal.
58 *Autoserotherapy. (Recherches expérimentales sur l'autosérothérapie.) A. Jousset.

58. Autoserotherapy.—Jousset has been experimenting with this method (Gilbert) of reinjecting some of the patient's own effusion, and has learned that it is effectual only under certain conditions. His experience with a hundred injections has demonstrated that the effusion in case of secondary pleurisy is more virulent than with primary or quiescent pleurisy, and this virulence persists with a certain fixity; in the other cases the virulence gradually grows less and less. These facts show the necessity for discrimination in the application of autoserotherapy; it is liable to do harm in the virulent secondary cases. The auto-injections are liable also to induce anaphylaxis; the original effusion may be shut off from the rest of the system by the lack of absorbing power of the inflamed pleura. The immediate and remarkable diuresis that follows the auto-injection seems to be an effort of the organism to get rid of the toxic substance that has been injected. On the whole, Jousset thinks that autoserotherapy as at present practiced should be abandoned, but that the principle is a valuable one and of great therapeutic efficiency if the technic is modified to make it a heteroserotherapy instead of an autoserotherapy. The effusion to be injected should be drawn from another patient, young and vigorous, the pleurisy in a quiescent stage, the effusion copious and containing from 0.5 to 1 gm. of fibrin per liter, and the effusion very toxic. The serum after coagulation should be heated to 55 C. for an hour on three successive days. Of this fluid from 20 to 30 gm. should be used for the therapeutic injection in another patient in case a pleuritic effusion is dragging on indefinitely.

Bulletin de l'Académie de Médecine, Paris

February 27, LXXVI, No. 9, pp. 149-171

59 *Morbid Lack of Thirst. (L'hypodipsie et les oligoptotes.) P. Fabre.
60 Biology of the Ascaris. (Notes et observations sur la vie des Ascarides.) Perroncito.

59. Persistent Lack of Thirst.—Fabre had his attention called to the subject of a morbid lack of thirst by the case of a man of 55, who, after the death of his son, did not drink any fluids for twenty-seven days. Since then Fabre has collected and tabulated twenty-three unpublished cases of total or very pronounced abstention from fluids, and cites a number from the literature. The individuals did not seem to suffer from their abnormally small intake of fluids, and he draws the conclusion that as a rule we drink more at meals than the system really needs. Drinking at meals is a custom rather than a necessity.

Journal d'Urologie Méd. et Chirurgicale, Paris

January, XXX, No. 1

61 Lithiasis Through the Ages. (L'affection calculeuse à travers les âges.) A. Pousson.
62 Urine Findings in Case of Orthostatic Albuminuria. (Etude des échanges urinaires et particulièrement de l'excrétion urique dans un cas d'albuminurie orthostatique.) F. Widal, A. Lemierre and Ambard.
63 Urinary Disturbances from Fibroma of Uterine Cervix. (Des troubles urinaires provoqués par les fibromes du col utérin.) F. Legueu.

Lyon Chirurgical, Lyons

March, VIII, No. 3, pp. 241-364

64 Improved Rapid Serodiagnosis of Tuberculosis of Urinary Organs. (Réaction de l'antigène—Debré and Paraf.) M. Heitz-Boyer.
65 Perforation of Duodenal Ulcer. (Des perforations brusques de l'ulcère duodénal en péritoine libre.) M. Lagoutte. Commenced in No. 2.
66 Toxic Appendicitis. (De l'appendicite toxique.) L. Bérard and P. Vignard.
67 *Operative Treatment in Paralysis Agitans. (De l'intervention chirurgicale dans la maladie de Parkinson.) R. Leriche.

67. **Operative Treatment in Paralysis Agitans.**—According to Leriche's view of the factors causing paralysis agitans, section of the posterior spinal roots should have a curative influence. He regards the affection as the result of a sensory excitation, ignored but incessant, keeping the muscles constantly on the strain. If the peripheral excitation could be reduced, the rigidity and tremor would subside. On these premises he recently performed the Foerster operation, severing the fifth, sixth and eighth cervical roots on each side by the Guleke extradural technic in an extremely severe case of paralysis agitans of many years' standing. The patient was a man of 53, and for eight years his muscles had been rigid. He walked with head thrown back, the neck stretched, and the incessant tremor and cramps had driven him to morphin. The operation was difficult on account of the rigidity, but the benefit from it was unmistakable, the tremor and cramps being much modified, but the rigidity was not influenced. In another case Leriche would section the lumbar rather than the cervical roots; such patients suffer more from their legs than their arms. Van Gehuchten has called attention to possibility of benefit in Parkinson's disease from some modification of the Foerster technic, but has not reported any application of it in practice.

Lyon Médical, Lyons

March 3, XLIV, No. 9, pp. 465-528

68 Graft of Sciatic Nerve in Dog to Replace Stretch of Cervical Pneumogastric Nerve on Both Sides. Survival of Dog. (Greffes de nerfs pneumogastriques. Résection bilatérale des pneumogastriques chez le chien dans leur portion cervicale. Application dans la même séance de deux greffes de nerfs sciatiques.) E. Duroux.

Presse Médicale, Paris

March 2, XX, No. 18, pp. 181-192

69 *Tardy Nervous Symptoms in Syphilis After Salvarsan Treatment. (Les réactions nerveuses tardives observés chez certains syphilitiques traités par le salvarsan, et la méningo-vascularite syphilitique.) P. Ravaut.

70 Postoperative Air Cyst. (Pneumatose kystique post-opératoire consécutive à la réduction sans drainage d'un kyste hydatique du foie.) A. Cerné.

March 6, No. 19, pp. 193-200

71 Visual Disturbances Induced by Electricity. (Des troubles visuels provoqués par l'électricité.) F. Terrien.

69. **Tardy Manifestations in the Nervous System After Administration of Salvarsan.**—Ravaut examined the cerebrospinal fluid from one to fourteen months after injection of salvarsan, and he found that nearly every patient who had been injected during the second phase of the disease showed signs of considerable disturbance in the fluid, from simple excessive tension to large proportions of albumin and an intense reaction characterized by numbers of lymphocytes, polynuclears, plasma cells and a positive Wassermann reaction. He calls these reactions histologic meningorecurrences. He has previously published the conclusions of preceding research on the inflammation of the meninges and vessels in syphilis, all his data confirming the assumption that during the first phase of the syphilis the nervous system is not affected, but that when the patient enters the second stage the nervous system becomes much involved, generally in proportion to the extent and severity of the cutaneous manifestations. This involvement of the nervous system may remain latent, but it can be watched by examination of the cerebrospinal fluid. It usually has entirely subsided by the time the third stage enters on the scene unless there is some serious nervous affection. Ravaut gives a table showing the tardy findings in the fluid in thirty-three syphilitics treated with the salvarsan during the second stage, nearly every one showing evidences of a pronounced reaction, while other syphilitics in the first and third stage present no signs of a reaction. This is not the Herxheimer early reaction; it is rather an exacerbation of preexisting trouble. The arsenic alone is unable to induce it, but when it encounters the spirochetes in the nervous system, the struggle that ensues between the drug and and the parasite stirs up these changes in the fluid. The practical conclusion is, therefore, that the cerebrospinal fluid should be tested in patients in the second stage of the disease, and if it already shows signs of disturbance, salvarsan should be given with extreme caution. Given too forcibly, it reactivates lesions, which left alone would remain latent and heal in time spontaneously or under the ordinary measures. Among the thirty-three patients in the second stage he found traces of arsenic in the fluid in two cases three and eleven months after injection of the salvarsan. Nine patients had intense headache or tinnitus, one facial paralysis and one optic neuritis, none of which existed before the injection of salvarsan.

Revue de Gynécologie, Paris

February, XVIII, No. 2, pp. 129-256

72 *Ossification of Ovaries or Fallopian Tubes. (Recherches sur quelques cas d'ossification de l'ovaire et de la trompe.) S. Pozzi and X. Bender.

73 *Case of "White Bile" in Cancer of Ampulla of Vater. (L'hydropisie de la voie biliaire principale.) C. Lenormant.

72. **Ossification of Uterine Adnexa.**—This profusely illustrated article compares with two personal cases, seven from the literature, in which the ossification occurred in one or both ovaries, and two personal cases of ossification in an oviduct with two others on record. The osteoid concrement or actual ossification had nothing suggesting a teratoma in any instance. The ossification was always circumscribed and limited and had been preceded by calcification, and it always started in connective tissue.

73. **Hydrops of the Bile Passages.**—Lenormant reports a case in which the bile passages were found filled with a colorless fluid when the abdomen was opened to relieve progressive jaundice. The patient was a woman of 68 and a small cancer in the ampulla of Vater was the primary trouble. He has compiled thirty cases of hydrops of the bile passages from the literature, and in all but six cases the obstruction was the result of a neoplasm or of constriction from a fibrous band. In only three was there obstruction from gall-stones. The prognosis depends on the nature of the obstacle. The finding of a colorless fluid in the gall-bladder does not alone justify cholecystectomy; the rest of the biliary passages may be permeable. The gall-bladder should never be removed without thorough examination of the bile ducts and search for the possible primary neoplasm.

Revue Médicale de la Suisse Romande, Geneva

February, XXXII, No. 2, pp. 109-204

74 Two Unusual Cases of Hare-Lip. (2 cas de bec-de-lièvre pseudo-médian dont l'un compliqué d'anencéphalie.) A. Matthey.

75 Relations Between Chemical Composition and Pharmacodynamic Action of Narcotics. (Des rapports entre la constitution chemique et l'action pharmacodynamique des anesthésiques généraux et des somnifères de la série grasse.) B. Wiki.

76 *Experiences with Puerperal Fever. (Etude de cas de fièvre puerpérale 1903-1910.) C. Thélin.

76. **Puerperal Fever.**—Thélin concludes from the experiences with 441 cases of puerperal fever at the Lausanne maternity from 1902 to 1911, that puerperal infection occurs in about the same proportions after abortions as after deliveries at term, but that the post-abortion infection is far more liable to be severe. The number of preceding childbirths did not seem to influence the frequency of infection, but premature rupture of the fetal membranes and obstetrical operations had an unmistakable action in favoring infection. He urges statistics compiled by comparing the total puerperal morbidity including that commencing during or after abortion or delivery with that occurring exclusively after delivery and with that occurring exclusively after delivery in women who entered the maternity free from infection. For the Lausanne maternity these three figures were: total morbidity, 13.85 per cent.; real morbidity, 12.06 per cent., and the institutional morbidity, 7.75 per cent. The total puerperal mortality was 0.75 per cent., and the institutional mortality (women free from infection on entering), 0.03 per cent. The entire 441 cases are classified and compared from various standpoints in sixteen tables; one shows that in nearly 79 per cent. of the febrile cases it had been supposed that the placenta and membranes had been entirely expelled. In only 0.96 per cent. was it known that part of the placenta had been retained, and parts of the membranes in 6.73 per cent.

V. 58
1912

Revue Mens. de Gyn. d'Obstétrique et de Pédiatrie, Paris

February, VII, No. 2, pp. 81-160

77 *Puerperal Infection. (Encore l'infection puerpérale.) L. Demelin.
78 Uterine Hemorrhage Compelling Hysterectomy. (A propos de 3 cas de métrorragies ayant nécessité l'hystérectomie.) G. Deverre and R. Vaudescal.
79 Repose Before and After Childbirth. (De la mobilisation précoce des accouchées et, en particulier, de son influence sur l'involution et sur la statique de l'utérus.) L. Pierra. Commenced in No. 1. (Influence du repos des femmes enceintes sur le poids des nouveau-nés.) Magniaux.

77. **Prevention of Puerperal Infection.**—Demelin discusses the general principles for management of the third stage of labor, emphasizing the necessity for removing placental or other débris without violence to the uterine wall or even disturbing the protecting layer of mucus in the deeper layers of the mucosa. This mucous shield protects the walls against infection and may answer this purpose even against moderate infection in the uterus for a week. If in removing débris a hole is made in this lymph barrier, the door is thrown open to general infection. He advises removal of débris liable to putrefy when the presence of such is certain or suspected, but the exploration of the uterus should be done with extremest delicacy and caution. If nothing is found, he gives an intrauterine injection, then a vaginal douche and, if necessary, counteracts a tendency to anteflexion by applying a tampon above the pubis. In case of phlebitis, especially in the uterus region, he is careful to refrain from anything tending to mobilize the uterus, avoiding all vaginal douches, enemas or other measures liable to jar the uterus and dislodge clots and set up embolism.

Semaine Médicale, Paris

March 6, XXXII, No. 10, pp. 109-120

80 Technic for Determining Presence of Spirochetes in Syphilitic Lesions. (Des différents moyens de prélever le matériel pour la recherche du tréponème pale dans les lésions syphilitiques.) D. Wladissavlievitch.

Berliner klinische Wochenschrift

March 4, XLIX, No. 10, pp. 433-484

81 *"Altruistic Diseases." (Ueber altruistische Erkrankungen.) D. v. Hansemann.
82 *Septic Endocarditis. G. Jochmann.
83 Vaccination Against Cholera. (Erwiderung auf die Einwände Metschnikoff's gegenüber der Wirksamkeit der Choleraschutzimpfung.) J. Ferran (Barcelona).
84 Salvarsan in Syphilitic Disease of the Nervous System. (Erfahrungen über Salvarsanbehandlung syphilitischer und metasyphilitischer Erkrankungen des Nervensystems.) O. L. Kilenoberger.
85 The Normal Location for the Lung Apex. (Die normale Lungenspitzenhöhe.) K. Takata.
86 Dislocation of the Cervical Vertebræ. (Luxation der Halswirbelsäule.) E. J. Rommel.

81. **Altruistic Disturbances.**—Hansemann applies this term to conditions in which the relations between a certain organ and the whole system have become deranged, as in diabetes, cretinism, exophthalmic goiter, Addison's disease, etc. His reasoning is that every organ is of vital importance for the organism as a whole, in so far as we understand by "organ" a certain class of cells. The only organ which seems to form an exception to this rule is the spleen; the pulp of the spleen seems to have no altruistic importance and to act merely as a mechanical filter or destroyer of waste. No disturbances of any kind have been detected in the organism after the removal of the spleen, confirming this lack of altruistic action. All other organs are vital organs, that is, their loss leads to speedy death or gradual chronic disease. The conception of a diathesis, a dyscrasia, is merely one form of the altruism of cellular functioning. This altruistic action and influence of the cells has been described in the literature under many names and syndromes, but, regarded from this single standpoint, they are all seen to be merely the manifestation of the one phenomenon, namely, that the cells of the body give off metabolic products of a specific nature, and that the different classes of cells are not able to substitute each other, each having its own specific work.

82. **Septic Endocarditis.**—Jochmann has been able to find the causal germs in the blood in nearly every one of his twenty-eight cases of ulcerative endocarditis. Staphylococcus endocarditis can generally be traced to some skin affection, furuncles or felon, or some injury of the mucosa as in catheterizing the bladder; he found evidences of septic endocarditis in five of his seven cases of fatal "catheter fever." Multiple suppurative metastases are common in the staphylococcus type, while they are rare with streptococcus endocarditis; the former is almost inevitably fatal, as also pneumococcus endocarditis. Gonorrheal arthritis is liable to be accompanied by endocarditis, the latter manifesting its presence a few days later with intermittent fever and murmurs. There are usually other symptoms of the sepsis, retinal hemorrhage, enlargement of the spleen and albuminuria, and occasionally epididymitis and pleurisy. The prognosis is grave, but not hopeless; Jochmann had one of his three patients in this class recover. The most frequent form of the septic endocarditis is that induced by streptococci; some affection of some mucosa is generally the forerunner of the endocarditis; the acute form is the work of hemolytic streptococci, but the green-colony forming, non-hemolytic viridans is responsible for the chronic type which Schottmüller has described under the name of "endocarditis lenta." [His description was summarized in THE JOURNAL, May 14, 1910, page 1658.] Jochmann's experience with seven cases of this insidious chronic form of endocarditis has confirmed Schottmüller's statements, especially the insidious onset, the history of acute articular rheumatism, the shortness of breath on exertion, depression, dry cough, pallor and "bilious" complexion, enlargement of the spleen, sometimes of the liver and embolic processes may develop; he noted a hemorrhagic nephritis in three of his seven cases. The temperature ranged from 38 to 39 C. and on some days it was normal; chills are scarcely ever observed in this form of endocarditis. Bacteriologic examination of the blood points the way to treatment. While Schottmüller in 1910 said that treatment can be only symptomatic, the progress realized with serotherapy and vaccines suggests their use in the gonococcus and streptococcus forms; the others are too brief and stormy to permit much hope from any treatment. Jochmann has witnessed brilliant results, he says, in two cases from vaccine treatment with a vaccine made from the patient's own gonococci, injecting every fifth day 5,000,000 and upward of killed gonococci. In the *Streptococcus viridans* form he advises both serotherapy and vaccines, the protracted course of the affection giving opportunity for causal treatment. The results are not brilliant, but he thus saved one of his three patients.

Deutsche medizinische Wochenschrift

March 7, XXXVIII, No. 10, pp. 441-488

87 *Carbohydrates in the Diet of Diabetics. (Kohlehydratkuren bei Diabetikern.) H. Strauss.
88 Suture or Drain After Laparotomy for Diffuse Peritonitis? (Naht oder Drainage der Bauchhöhle bei der freier Peritonitis.) E. Sonnenburg.
89 *Indications for Treatment of Stomach Disease. (Indikationen zur chirurgischen und internen Behandlung der Magenerkrankungen und deren operative Dauererfolge.) H. Kümmell. Commenced in No. 9.
90 Serotherapy of Dysentery. (Erfolge der Behandlung der bazillären Dysenterie — Shiga-Kruse — mit antitoxischem Serum.) R. Kraus.
91 *Motor Insufficiency of the Stomach. (Motilitätsstörungen des Magens.) A. Borgbjärg.
92 *Simple and Reliable Test for Motor Functioning of the Stomach. (Motilitätsbestimmung des Magens.) P. Boas.
93 Retention of Water During Oatmeal Cures in Diabetes. (Ueber Wasserretention bei den Haferkuren der Diabetiker.) M. Mirowsky.
94 Various Forms of Myxedema. (Zur Einteilung der Myxödemformen.) E. Thomas.
95 Test for Resisting Power of Red Corpuscles. (Ueber Resistenz der Erythrozyten bei gesunden und kranken Menschen, nebst einer einfachen Methode zu ihrer Bestimmung.) L. v. Liebermann and F. v. Fillinger.
96 Schultze's Swinging to Revive the Newly Born, a Two-Edged Sword. (Zur Kritik der Schultzeschen Schwingungen als Mittel zur Wiederbelebung asphyktischer Neugeborner.) M. Hirsch.
97 Movable Colon. (Spontane Verschieblichkeit des Colons, ihre Ursachen und ihr palpatorisches Erkennen.) T. Hausmann.
98 Sound-Deadening Devices in Buildings. (Wohnung und Lärm.) H. Haenel.

87. **"Carbohydrate Cures" in Diabetes.**—Strauss remarks in the course of this general lecture on the dietetic treatment of diabetes, that milk cures may be very useful in certain cases, but that their value depends on the individual tolerance for milk, which must be determined in each case. The oatmeal cure frequently fails to benefit. Recent research indicates that oatmeal has no special advantage over wheat flour except

possibly in isolated cases. Strauss has derived great benefit from an occasional fluid day in severe diabetes, permitting the patient on that day nothing but tea, coffee, bouillon, mineral waters, wine or brandy. He sometimes permits oranges with this "drink day," and says the advantages of this combination and of the occasional day of restriction to fluids are not generally appreciated as they should be. He remarks that a proportion of albumin less than 60 gm. a day is too low for the permanent ration, so that the oatmeal and wheat flour cures—which contain less albumin than this—cannot be kept up long at a time. These and similar diets owe their effect to the absence of meat and their low caloric value in general. Their comparative indigestibility is another valuable factor, as the slowness with which the granules of starch are assimilated aids in preventing glycosuria from them. Carbohydrates in general should be taken very little at a time. An amount of sugar which would induce alimentary glycosuria in the predisposed, does not produce this effect if fractioned and distributed through the different hours of the day. Strauss reports that in his research and experience inulin was better tolerated than any other form of starch, and he urges its use in severe diabetes, especially for diabetics with acidosis. Comparatively small amounts are passed unutilized through the bowels, and he does not hesitate to urge its more general use on the transient course principle. As inulin is still so expensive, the best way is to order vegetables rich in inulin, such as artichokes and viper's grass (similar to salsify). He regards the progress of the last few years as mainly in the better appreciation of an exclusive or modified flour-soup cure with which vegetables can be combined. The restriction to a single form of carbohydrate is the main point in these cures. This is readily understood, as we know that when drugs with somewhat similar action are given together their effects are not only superposed, but have a direct cumulative action.

89. **Remote Results of Operations on the Stomach.**—Kümmell discusses the indications for internal and operative treatment of stomach affections, and states that of eighty patients with a non-malignant stomach trouble, requiring operative measures, generally gastro-enterostomy, seventy were found a year or so later to be completely cured, ten still had subjective disturbances, including six with objective findings. In the latter group is one patient whose gastric ulcer had been resected; cancer developed at another point in the stomach. Of the 519 cancer patients, four are still living from nine to sixteen years after the resection; twelve from two to five; thirteen, three years; eighteen, two years, and thirty-five, one year. The cancer was already inoperable in the majority, but resection was deemed promising in 124 cases and 30 per cent. of these patients were living three years later.

91. **Motor Insufficiency of the Stomach.**—Borgbjærg has been studying the conditions in regard to motor functioning of the stomach in nearly all his patients for many years, and he found abnormal conditions in this respect far more frequent than is generally accepted. He classifies the findings as five, six, eight and twelve hours' retention, when after these intervals 10 c.c. is left in the stomach from a preceding test-meal. The five- and six-hour retention is usually observed with an organic stomach affection, but sometimes with mere dyspepsia with or without hypersecretion, and occasionally with an uncomplicated internal affection. It may also be encountered with asthenia. The finding of 2 or 5 c.c. remains of the test-meal on rinsing out the fasting stomach twelve hours later, is generally a sign of cancer, ulcer or gastritis. The motor functioning is often restored to normal in undernourished patients with forced feeding. When there is much constipation with five- or six-hour retention, dieting to cure the constipation may restore normal motor conditions in the stomach.

The test-meal he has found most instructive is the Bourget-Faber meal of 250 c.c. oatmeal gruel, 50 gm. chopped boiled beef, 50 gm. white bread with butter, eight stewed prunes and a tablespoonful of cranberry sauce.

92. **Improved Convenient Test for Motor Functioning of the Stomach.**—Boas, on the other hand, prefers the Leube test-meal, although he remarks that he knows of no extensive research on its application to the sick and the well. He says that the addition of prunes and cranberry sauce (as above) makes extra demands on the stomach beyond what is needed, and may overtax the diseased stomach. He has found that water alone is a sufficiently instructive test-meal, while it does not stimulate gastric secretion, and thus has no reflex action on the pylorus; the balance remaining in the stomach after a given interval can be readily determined and there is no sedimentation to interfere with the findings. If 400 c.c. of water is ingested fasting only 50 or 60 c.c. are left after thirty minutes in a normal stomach. If more than this is found, motor insufficiency can be assumed. To aid in estimating the remaining quantity, Boas adds 20 drops of water-soluble chlorophyl to the 400 c.c. of water, the patient drinking it from a green glass, so as not to be disturbed by the color of the water. After thirty minutes the remaining water is aspirated or expressed from the stomach; if the patient bends over forward, it is possible to force out nearly all the fluid in the stomach. In case of doubt, the stomach can be rinsed out and the tint of the rinsing water will show the quantity that had been left. While the fluid is in the stomach the patients must be told not to swallow any mucus or saliva, as the chlorophyl is liable to collect on it. Comparative tests with this technic and the Leube test-meal have confirmed the reliability of the chlorophyl technic, and demonstrated that it surpasses all others in delicacy and instructiveness. Boas has applied it in 130 cases in the last two years. In fifty healthy individuals there was less than 50 c.c. thirty minutes later; in four other persons not a trace of green fluid could be discovered in the stomach. With severe stenosis of the pylorus or duodenum, the entire 400 c.c. was refound after thirty minutes, showing at once that relief was possible only from operative measures. In the cases with 200 or 300 c.c. remaining in the stomach, dieting and lavage may restore practically normal conditions, and the chlorophyl test repeatedly applied will show whether conditions are improving under them or not. The motor disturbances with cancer seem to depend on its location; a gradual increase in the amounts of the residual content testifies to a tumor encroaching on the pylorus. He found retarded evacuation of the stomach in 26 per cent. of his achylia cases and in 50 per cent. of the cases of gastric ulcer, while motor functioning was normal in the other 50 per cent., as also in nineteen of twenty-two patients with hyperacidity. His experience on the whole shows that secondary atony is far more frequent than the idiopathic.

Medizinische Klinik, Berlin

March 10, VIII, No. 10, pp. 385-428

99 *Laryngeal Tuberculosis. (Therapie der Kehlkopftuberkulose.) M. Hajek.
100 *Hypertrophy of the Prostate. (Ueber Prostatahypertrophie.) M. Lössauer.
101 Olfactory Hallucinations. (Geruchshalluzinationen.) A. Kutzinski.
102 *Kidney Calculi in Children. (Nierensteine im Kindesalter.) O. Ebert.
103 Salvarsan Fever. (Zur Frage des Salvarsanfiebers.) H. Hecht.
104 * Camphor in Pneumonia. (Zur Frage der Pneumoniebehandlung von Walter Löwenstein.) A. Wachter.
105 The Negative Wassermann Reaction. E. Kromayer and Trinchese.

99. **Treatment of Laryngeal Tuberculosis.**—Hajek remarks in the course of this sketch of the history and present status of the treatment of laryngeal tuberculosis, that it not infrequently happens that any operative measures applied to the throat of very sensitive patients induce fever and disturb the general health to such a degree that this far outbalances any benefit derived. Individualization is the *sine qua non* for any prospect of success in laryngeal tuberculosis. Such patients require institutional supervision and care even more than those with pulmonary tuberculosis. Even in the individual case, conditions differ from week to week. But when such care is possible the finest results are attainable in some cases. He has had many patients permanently cured for five to ten and eighteen years. One such patient was recently reexamined and the scar left from curetting eighteen years before had persisted apparently unmodified without any tendency to recurrence of the tuberculosis. The general health had always been good in this case. He has found that injection of alcohol to block the superior laryngeal nerve is an effectual means

V. 58
1912

to arrest the pain and difficulty in swallowing in the advanced cases. The patients are able to get along for months or years in fair comfort afterward. He regards the actual cautery as an adjuvant to, not a substitute for, surgery. He adds that light, superficial application of the cautery is liable to induce more of a reaction than a deep thorough cauterization. He has treated with tracheotomy three patients with stenosis from laryngeal tuberculosis, and states that a permanent cure was effected in each case. He ascribes this to the complete rest of the diseased larynx after the tracheotomy. The lesion is made up of a small tuberculous infiltration and extensive chronic edema. Under total rest of the parts the edema subsides and nothing is left but the insignificant tuberculous infiltration, causing no disturbances. In two other cases he did the tracheotomy solely as a therapeutic measure from the above considerations, and both patients were soon permanently cured. These experiences compel him to advocate early tracheotomy for serious tuberculous disease of the larynx if the lungs and general health are in a relatively good condition.

100. **Hypertrophy of the Prostate.**—Lissauer reports the histologic findings in the prostate from twenty unselected cadavers. The findings fail to sustain the assumption that preceding inflammation has much to do with the hypertrophy. Arteriosclerosis was a frequent finding. He found no suggestion of myoma in any case, although such was evident twice in a previous series of seventeen cases. In his extensive research on animals he never found any indications suggesting hypertrophy of the prostate; in sheep the prostate was frequently atrophied.

102. **Kidney Calculi in Children.**—Ebert reports the case of a boy of 6 who had typical kidney colics, coming on with a chill and vomiting, the pains more severe than those of ordinary pyelitis. The microscope showed numerous red corpuscles in the urine and a calculous sediment, and roentgenoscopy disclosed a concrement in the kidney which was readily removed. There was no history of gout in the family, and the child had never had scarlet fever or nephritis, merely measles and whooping-cough before the age of 3 and erythema nodosum at 5. Ebert reviews the literature on the subject of nephrolithiasis in children. Neupauer has reported from Budapest 192 cases and Mousseaux seventy-seven in France. Certain regions seem to predispose to nephrolithiasis in children; it is particularly frequent in Hungary, Turkey and Silesia. Lime in the water, coarse, indigestible food, kidney and cardiovascular derangement and prolonged illness and convalescence seem to be predisposing factors.

104. **Camphorated Oil in Pneumonia.**—Wachter has been treating his pneumonia patients during the last three years with one or two daily subcutaneous injections of 3 or 5 c.c. of camphorated oil. He has found it effectual in stimulating and strengthening the heart, while it seems to have a direct action on the lungs and soothes the brain. The crisis occurred in from one to nine days in his thirty cases. The pain was arrested and the agitation subsided; even the delirious patients quieted down.

Münchener medizinische Wochenschrift

March 5, LIX, No. 10, pp. 513-568

106 Diagnostic Puncture of the Brain in General Paralysis. (Zur histologischen Diagnose der progressiven Paralyse mittels Hirnpunktion.) B. Pfeiffer.

107 *Effects of Hypophysectomy. (Folgen der Exstirpation der Hypophyse.) G. Ascoli and T. Legnani.

108 Diversion of Lymph Stream in Treatment of Chronic Edema Following Contusion. (Die Lymphableitung, als Heilmittel bei chronischen Oedemen nach Quetschung.) E. Kondoleon.

109 Abortive Treatment of Syphilis. (Zur Abortivebehandlung der primären Lues.) M. Voss.

110 Action of Salvarsan on Cancer Cells. (Ueber einen mit Salvarsan behandelten Fall von malignem Gehirntumor.) Noehte.

111 Syphilitic Meningomyelitis or Tabes? (Zur Aetiologie der Metasyphilis.) A. Villinger.

112 *Painting the Peritoneum with Tincture of Iodin in Tuberculous Peritonitis. (Pinselung des Bauchfells mit Jodtinktur bei der tuberkulösen Peritonitis.) A. Hofmann.

113 *Treatment of Tuberculose Bone Lesions in the Hands with Pyrogallol Salve. (Behandlung der Spina ventosa mit Pyrogallolsalbe.) K. Kennerknecht.

114 Action of Organ Extracts. (Wirkung der Organextrakte und die Theorie der Hormone.) L. Popielski.

115 Primary Manifestations of Lupus. (Primäreffloreszenz des Lupus und Primäraffekt.) H. Vörner.

107. **Depressing Influence of Removal of the Hypophysis on Growth.**—Ascoli and Legnani give a series of photographs showing two puppies of the same size from the same litter. The hypophysis of one was then removed and the puppy ceased to grow, while his brother grew to be a large dog, as shown in the photographs up to eight months. The skeleton of the dog operated on showed defective ossification and dentition and the dog did not attain sexual maturity. Both the internal and external sexual organs persisted in an infantile condition. The difference in structure in the spleen and thymus was also striking, but the thyroid more nearly approached normal. These experiments were conducted during the last three years on dozens of animals, but few survived the removal of the hypophysis. The best technic was by access through the temporal-parietal bone, turning back a broad flap and pushing the temporal lobe out of the way. The trauma from the operation is surprisingly slight, strange as may it seem, scarcely noticeable, but the hypophysis seems to be a vital organ, as so many of the dogs died within two or three days after its removal.

112. **Painting the Peritoneum with Iodin in Tuberculous Peritonitis.**—Hofmann painted with tincture of iodin a portion of omentum which protruded from the abdomen through a stab wound and was surprised at the powerful reaction to it, the profuse exudation and sticking together of serosa surfaces. Fully 0.5 c.c. of effusion a minute oozed from the wound. This observation suggested systematic application of the same measure in treatment of tuberculous peritonitis, and he reports four cases in which this was done. He was impressed in all with the regular reaction and the prompt cure. The patients have been reexamined again recently and the cure found permanent; no untoward by-effects were noticed in any instance. The patients were women of 23 and 30, a girl of 15 and a child of 6. In the first case the laparotomy was done for suspected chronic appendicitis and the peritoneum and intestines were found studded with miliary tubercles. The parietal peritoneum, the intestines and the omentum were painted with 10 per cent. tincture of iodin. As many of the loops of intestine were painted as could conveniently be reached; after the tincture had been applied to the intestine it was wiped off with gauze. The painting was carried down into the pouch of Douglas and through the hypochondrium on both sides. The abdominal wound was then sutured. By the end of twenty-four hours the abdomen was distended with ascites and tender, but the subjective disturbance was slight and there was no fever or vomiting. By the end of the second week there was no further trace of ascites, the general condition was good, the abdomen no longer tender. The patient was allowed to get up the third week and was discharged cured by the end of the fourth week. There have been no further symptoms during the eighteen months to date. In the second case a child of 6 had just recovered from a right pleurisy with effusion, and râles were audible over both lower lobes, but no dulness, the abdomen was distended with fluid and slightly tender; temperature 38 C. A median laparotomy showed numerous cheesy tubercles, the loops of intestine adherent and bathed in fluid. After the toilet of the peritoneum, the entire abdominal space was painted with the iodin. The child vomited several times and the abdomen was tender the first day or so, but the meteorism and ascites gradually subsided and in three weeks the child was permitted to get up, the râles had vanished, and during the year since the child has been apparently perfectly well and lively. The rapid subsidence of the pulmonary symptoms in this case suggest a specific action from the iodin. No signs of the slightest intoxication were evident in either case. In the two other cases the fallopian tubes were found so thickly studded with tubercles that they were removed, in addition to the iodin painting. Both patients were dismissed cured in less than a month.

113. **Treatment of Tuberculous Ostitis with Pyrogallol.**—Kennerknecht has been treating tuberculous lesions of the shorter long bones in children for the last four years with a pyrogallol salve, and states that by this means it has been pos-

sible to cure without mutilation. The lesions in the eight cases reported were in the hands and they were first soaked for half an hour in soapy water and then dressed with a 10 per cent. pyrogallol salve, or a 5 per cent. salve if the skin showed signs of irritation, and later substituting a 2 per cent. salve. The tuberculous processes healed completely in from two to nine months.

St. Petersburg medizinische Zeitschrift

February 28, XXXVII, No. 4, pp. 47-62

116 The Neurologic Aspect of the Period Including Puberty. (Das Entwicklungsalter von neurologischem Standpunkt.) W. v. Holst.
117 Radium Therapy of Chronic Articular Rheumatism, Gout and Sciatica. (Ueber chronischen Gelenkrheumatismus, Gicht und Ischias.) Kemen.
118 General Principles of General Anesthesia. (Ueber Narkose.) G. Tiling. Commenced in No. 3.

Therapie der Gegenwart, Berlin

March, LIII, No. 3, pp. 97-144

119 *Atropin in Treatment of Phosphaturia. F. Umber.
120 Acute Influenzal Bronchiolitis in Adults. (Die akute Influenzabronchiolitis der Erwachsenen.) L. Sylliba.
121 *Dietetic Treatment in Diabetes. (Einfluss verschiedener Nahrungsmittel und Kohlehydratentziehung auf die Oxykosurie und die Acidose beim Diabetes mellitus.) R. Hartelust.
122 The Dioptrics of Gastroscopy. (Zur Dioptrik des Gastroskops.) M. Sussmann.
123 *Spinal Apoplexy. (Eine spontane Rückenmarksblutung.) A. Becker.

119. Atropin in Treatment of Phosphaturia.—Obstinate phosphaturia entails constant danger of concrement formation, and it is important to counteract this tendency by rendering the urine acid, which ensures the keeping of the phosphates in solution. Phosphaturia, Umber says, has been shown to be the result not of abnormal amounts of phosphoric acid in the urine, but of an excess of the earthy alkalies in proportion to the amount of phosphoric acid. Excessive secretion of hydrochloric acid deprives the urine of its due proportion of acid. During digestion the acid in the stomach is bound and thus withdrawn from the intermediate metabolism. In the majority of cases of phosphaturia the patients have hyperchlorhydria with general neurasthenia. For these and other reasons cited, atropin has a pronounced action in increasing the acidity of the urine and reducing the elimination of calcium. He supplements the atropin with food as free from lime as possible, restricting the amount of berries, potatoes and vegetables and forbidding entirely milk and eggs. He gives the atropin in small doses, not over 0.0005 gm. a day at first, increasing in a few days to 0.003 gm. a day. The dose is from 10 to 20 drops of a 1 per thousand aqueous solution of atropin sulphate after meals. He keeps up the maximum dose for two weeks and then gradually reduces it, the entire course requiring three or four weeks.

121. Dietetic Treatment of Diabetes.—Hartelust gives the detailed tabulated metabolic findings in six diabetics on different diets. They show that the conditions in respect to utilization of the diet vary widely in different diabetics; some tolerate and thrive on what others cannot stand; this applies particularly to fat. It is impossible to formulate any general rules applicable to all. He found that the dread of acidosis if carbohydrates are omitted from the diet is unfounded; in many cases the acidosis diminished under this.

123. Spontaneous Spinal Apoplexy.—Becker's patient was a previously healthy woman of 33 and nothing could be found to explain the spinal apoplexy. The resulting paralysis and sensory disturbances have improved somewhat during the six months to date, but the young woman is still unable to stand without assistance. Treatment was with morphin to reduce the fright and distress; water cushions were used to prevent decubitus. Mercury and iodid proved ineffectual.

Wiener klinische Wochenschrift, Vienna

February 29, XXV, No. 9, pp. 331-366

124 *Anaphylaxis. (Ueber Anaphylaxie.) R. Doerr.
125 Roentgenoscopic Diagnosis of Intestinal Stenosis. (Zur radiologischen Diagnostik der Dünn- und Dickdarmstenose.) E. v. Czyhlarz and A. Seika.
126 *Associated Valvular Defects and Exophthalmic Goiter. (Ueber paradoxe Albuminurie und Urobilinurie, über die Entstehung kardialer Zirrhosen und "Herzkropf" bei organischen Trikuspidalerkrankungen.) K. Staunig
127 *Postoperative Ischemic Paralysis. (Weiterer Fall von Druckl ähmung an der oberen Extremität nach kurzdauernder Anwendung der Esmarchschen Blutleere.) B. Burianek.

March 7, No. 10, pp. 367-402

128 Dermatitis with Atrophy. (Zur Klinik und Aetiologie der atrophisierenden Dermatitiden.) M. Oppenheim.
129 *Operative Treatment of Epilepsy. (Zur Technik und Kasuistik der Epilepsieoperationen.) Doberer.
130 Relations Between Pineal Gland and the Genital Organs. (Beziehungen der Zirbeldrüse zum Genitale.) P. Blach and E. Hulles.
131 The Aldehyd Reaction in the Urine and Deranged Circulation. (Klinische Beobachtungen über die Ehrlichsche Aldehydreaktion bei Kreislaufstörungen.) A. Jonass.

124. Anaphylaxis.—Doerr reports research which in connection with that of others suggests that changes in the coagulating property of the blood are the main factor in the phenomena of anaphylaxis, and that these changes are induced by the activation of coagulation ferments by absorption of antagonistic substances. The endothelium suffers first and foremost from the pathologic physical changes in the blood. The resulting abnormal permeability of the endothelium explains the edemas (serum sickness, local anaphylaxis) and the lymphagogue phenomena observed. From the endothelium the abnormal irritation is transmitted to the smooth muscles of the vessels which at once undergo a powerful contraction, but in the viscera soon dilate again.

126. Associated Valvular Defects and Exophthalmic Goiter. Staunig describes a case of paradoxic albuminuria and urobilinuria accompanying a mitral and tricuspid defect, cirrhosis of the liver, enlarged spleen and symptoms of exophthalmic goiter. He explains the syndrome as the result of the abnormal conditions in the circulation from the valvular defects. His assumptions were confirmed by the results of digitalis treatment both in this and in a second case. The venous engorgement had induced cirrhosis in the liver with resulting urobilinuria; in the kidneys it had induced albuminuria, and in the thyroid it had induced excessive functioning. The signs of the latter first developed as the valvular defect became manifest, at the age of 44, and the resulting symptoms of exophthalmic goiter rose and fell with the improvement in the circulation under the influence of the digitalis. As the heart action became stronger under the medication, the Basedow symptoms subsided. This tentative explanation of the case was confirmed by the benefit in the second case, the patient presenting the picture of cirrhosis of the liver except that pulsation was evident in the large, hard liver, and this pulsation was traced to moderate stenosis of the mitral and insufficiency of the tricuspid valves. Although there were no signs of failing compensation in this case and a heart tonic was not absolutely indicated at the time, he administered digitalis and at once the aldehyd reaction for urobilinogen in the urine appeared and increased to a 1 to 360 dilution, and albumin appeared in the urine up to 1.5 per thousand, both of these reactions then gradually subsiding again completely. There were no signs of exophthalmic goiter in this second case; the valves in the upper part of the vena cava and the thyroid veins were evidently still functionally capable. These cases teach that a jugular pulse is not a constant symptom of tricuspid insufficiency, while the pulsation in the liver is easily and unmistakably evident. The anatomic conditions in regard to the valves in the superior jugular vein vary in different persons.

127. Postoperative Ischemic Paralysis.—In Burianek's case, as in that recently reported by Wolff, the Wassermann reaction was positive although the patient strenuously denied syphilis. Under specific treatment some improvement was realized. Suspicion of syphilis should warn against the use of Esmarch's elastic constrictor for fear of a predisposition to resulting injury on the part of the vessels under the influence of the syphilis.

129. Operative Treatment of Epilepsy.—Doberer gives an illustrated description of a simple technic with which he operated in a case of severe epilepsy, the boy of 12 having from eight to fifteen seizures daily, some occurring in the night, and his mental condition was rapidly approaching idiocy. His parents pleaded for an operation in 1910, but Doberer could

V. 58
1912

find nothing on which to base an operation, but a year later he yielded and cut a five-sided flap in the right sensory-motor region, with a crucial incision in the dura. He then took up one of the right-angled flaps of the dura and, turning it over, worked the whole of it backward, flat, into the space between the dura and the intact skull. He did this with each of the four dura flaps. The fold where each flap was turned over formed a cushion on which the edges of the bone flap rested when it was replaced. He gave the bone flap a tap with the hammer to ensure its fitting tight in place. No ligature or foreign material was used and the wound healed promptly without apparent callus. The same day the child was rational and able to control micturition and defecation, which for long had not been the case, and except for bearable headache he felt quite well. A few seizures occurred during the week but of moderate intensity and since then there has been no recurrence. The child remained a month in the hospital and his parents scarcely recognized him when a lively and intelligent boy was returned to them. The seizures in this case had commenced with an extensor spasm in the left hand, gradually becoming general; there was no history of trauma or inherited taint except hysteria in the mother. Doberer has since applied the method in five other cases and a confrère in two more. In one case the improvement was only transient; in all the others it has been permanent to date, even in patients 16 or 20 years old with epilepsy of many years' standing. He commends this technic as the simplest possible for the purpose, comparatively harmless and with complete restoration of the integrity of the skull afterward. His first operation dates from October, 1911, so he does not venture to speak of a permanent cure; time alone will decide this. He calls it the *Umstülpungsmethode*, referring to the turning over backward of the dura flaps.

Zentralblatt für Chirurgie, Leipsic

March 2, XXXIX, No. 9, pp. 281-312

132 *Laminectomy Under Local Anesthesia. L. Heidenhain.
133 Resection of Cervical Ribs from the Rear. (Neue Methode der Resektion der Halsrippen von rückwärts.) E. Streissler.
134 Perforated Gastric and Duodenal Ulcers. (Zur Operation des perforierten Magen- und Duodenalgeschwürs.) O. J. Lauper.

132. Laminectomy Under Local Anesthesia.—Heidenhain states that he has performed laminectomy under local anesthesia in four cases during the last two years and was very favorably impressed with the advantages of this technic for the purpose. From the first incision to the final suturing of the skin there was not the slightest pain although four vertebræ had the arch removed in some of the cases. The great drawback is that it is generally impossible to determine the exact site of the lesion, so that quite an extent of the spine has to be rendered anesthetic on account of the doubt. Braun has stated that 250 c.c. of a 0.5 per cent. solution of novocain can be injected without harm, and this will be enough, Heidenhain thinks, for the most extensive laminectomy. It is usually possible to anesthetize from one point the corresponding half of three vertebral arches.

Zentralblatt für Gynäkologie, Leipsic

March 2, XXXVI, No. 9, pp. 257-288

135 *Absorption of Toxins and Anesthetics by Peritoneum. (Toxinresorption aus der Bauchhöhle und intraperitoneale Narkose.) O. Hoehne.
136 Possibility of Insanity of Genital Origin in Women. (Möglichkeit des Irrsinns genitalen Ursprungs beim Weibe.) L. M. Bossi.
137 Uterine Cancer. (Zur Frage der abdominalen Radikaloperation bei Uteruskarzinom.) L. A. Kriwsky.

135. Absorption of Toxins and Anesthetics from Abdominal Cavity.—Hoehne found in extensive animal experimentation that preliminary treatment to induce a slight aseptic irritation of the abdominal cavity effectually protected the animals against infection from even virulent germs, but that it did not check the absorption of toxins from the cavity. A mixture of ether and alcohol was absorbed just the same whether or not the animals had received the prophylactic injection of camphorated oil or other substance to induce the prophylactic irritation. The experiences related teach the importance for removing the exudate in peritonitis after it has answered its purpose, namely, to shut off the germs and their products from being absorbed. In the course of this task it has become saturated with toxins and in time thus becomes a source of intoxication and danger and should be removed without delay. The removal should be done, however, with the greatest care, bearing in mind that if sound tissue is incised to gain access to the exudate, there is liable to be rapid absorption of large amounts of bacteria and toxins through the fresh raw surface. It is obvious that the patient would be worse off after this than if no operation had been attempted. The anesthesia and the operation may cooperate, but the opening up of avenues for absorption by the areas of new raw surface and the consequent flooding of the organism with bacteria and their toxins is the main factor. He emphasizes the importance of making the prophylactic injection some time before the contemplated operation; in his successful experiments the interval was from three to nine days.

Zentralblatt für innere Medizin, Leipsic

March 2, XXXIII, No. 9, pp. 197-220

138 Radium Emanations in the Blood. (Untersuchungen über Radiumwirkung.) J. Kemen.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 8, XXXIII, No. 17, pp. 169-176

139 Indications for Operative Measures in Tuberculosis of the Testicles and Epididymis. (Circa le indicazioni della orchiectomia nella orchite e nella epididimite tubercolare.) N. Federici.

February 25, No. 24, pp. 241-256

140 *Improved Oil Method for Diagnosis of Cholelithiasis. (Il metodo del Petry nella diagnosi di colelitiasi.) F. Dematheis.

February 27, No. 25, pp. 257-264

141 *Vaccination Against and in Treatment of Tuberculosis. (Vaccinazione antitubercolare preventiva e curativa nell' uomo.) Duquaire.

February 29, No. 26, pp. 265-272

142 *Treatment of Emphysema. (Due casi di imponente enfisema sottocutaneo e relativa terapia.) E. Biondi.

140. Diagnosis of Cholelithiasis.—Dematheis describes five cases which confirm the value of the method of diagnosis of cholelithiasis by microscopic examination of the sediment of the stomach content siphoned out three-quarters of an hour after ingestion, fasting, of 150 or 200 c.c. of olive oil. Dematheis says, however, that the findings are rendered much more reliable if the passage of bile into the duodenum and its reflux thence into the stomach are promoted by massage of the liver and gall-bladder region and by the addition of a little glycerin to the oil, and by administration of the active principle of belladonna. These improvements in the technic much enhance the probabilities of finding the characteristic concrements in the stomach content.

141. Vaccination Against and in Treatment of Tuberculosis.—Duquaire has been at work for two years with Maragliano's vaccine and reports its use in five cases as a preventive and in forty others as a curative remedy, his conclusions being favorable. It acts like a tuberculin, but its mode of application is simpler, being a single application like vaccination against small-pox. There was never any febrile reaction but in about four months, he says, under its influence a condition of active immunity developed. The vaccine is made from human tubercle bacilli first rendered more virulent by passage through guinea-pigs, then killed by heat and triturated. Duquaire applied the vaccine at three points on the arm or leg, after scarifying, the same as for small-pox vaccination, scarifying at another point for control.

[Maragliano's premises on which this method of treatment is based, were described in THE JOURNAL Dec. 8, 1906, page 1965, with the results in his experience to that date.]

142. Treatment of Emphysema.—In the two cases reported by Biondi extensive emphysema developed from rupture of a cavity in the lung or wound of the lung from a fractured rib. The patients were intensely and dangerously incommoded by the general diffusion of air, threatening suffocation, until he introduced an ordinary puncture needle to which a rubber tube was fastened, the outer end of the tube resting in a vessel containing an antiseptic solution. The relief was immediate, the escaping air bubbling up through the fluid and the distended tissues subsiding into place; the patients succumbed to

the progress of their causal trouble but they were relieved from all disturbances from the emphysema during the few days they had to live.

Policlinico, Rome

February 25, XIX, No. 9, pp. 302-336

143 Chronic Diarrhea. (Terapia delle diarree croniche.) P. Alessandrini.

144 Trendelenburg Position Cause of Rupture of Suppurated Ovarian Cyst. G. Dialti.

February, Medical Section No. 2, pp. 49-96

145 *Primary Cancer of the Lung. (Sul cancro primitivo del polmone.) P. Ciuffini.

146 Fibrolysin in Treatment of Delayed Resolution in Pneumonia. (Azione della fibrolisina nelle polmoniti con esito in induramento—polmonite produttiva.) A. Osti.

February, Surgical Section No. 2, pp. 49-96

147 Experimental Research on Cause of Death in Necrosis of the Pancreas. (Le cause della morte per necrosi pancreatica.) D. Maragliano.

148 Experimental Research on Treatment of Fracture of the Patella. (Sulla guarigione delle fratture trasversali della rotula.) A. Pignatti.

145. **Primary Cancer of the Lung.**—Ciuffini reports a case in a man of 42 and compares it with other cases on record. In his case pain gradually increasing in intensity was the first symptom, but in a few days this was followed by weakness, anorexia and cough, the pain spreading to the arm as the brachial plexus became compressed by the growth. It was in the upper lobe of the right lung and proved fatal in one year.

Riforma Medica, Naples

February 24, XXVIII, No. 8, pp. 197-224

149 Myasthenia. (La fisiopatologie della miastenia bulbospinale e la teoria pluriglandulare.) R. Massalongo.

150 Resection of Cystic Pancreas. (Caso di doppia cisti del pancreas. Estirpazione totale delle due cisti mediante resezione del pancreas. Guarigione.) G. De Francisco.

Brazil Medico, Rio de Janeiro

February 15, XXVI, No. 7, pp. 61-70

151 Brazilian Non-Pathogenic Form of Ameba. (Sobre uma nova entamoeba humana—Entamoeba brasiliensis n. sp.) H. de B. Aragão.

152 Albuminurias. (Albuminurias em geral.) L. M. V. Lima. Commenced in No. 5.

Revista de Medicina y Cirugia, Havana

March 10, XVII, No. 5, pp. 125-158

153 Anomalies in the Arteries. (Bifurcacion primitiva de la arteria humeral, y disposicion anormal de las arterias de la mano.) R. Stincer.

154 Cholera at Marseilles, France, in 1911. (El colera morbo asiatico de Marsella en 1911.) L. M. Cowley.

Semana Medica, Buenos Aires

February 8, XIX, No. 6, pp. 241-292

155 Tests of Kidney Functioning. (Semeiologia funcional del rinon. Consideraciones sobre la glicosuria fisiologica en la patologia medica renal.) C. B. Udaondo.

156 *Polyserositis. C. J. Pedemonte.

157 Sterilization of Drinking Water. (El problema del agua potable.) V. Delfino.

158 Heart Disease and Pregnancy. (Cardiopatias y embarazo.) S. Recasens.

156. **Polyserositis.**—Pedemonte discusses the symptoms, diagnosis, treatment and prognosis of polyserositis and reports three cases. The first patient was a girl of 8, who for six months had tired unusually easily and had been coughing for three months. The tuberculin reaction was positive but no tubercle bacilli could be cultivated from the pleural effusion or ascitic fluid. The other patients were young women; the pleural effusion and ascites were apparently reabsorbed, but one patient had a tuberculous affection of the right knee develop seven months later. Treatment has to be mainly symptomatic, with diuretics, hydrotherapy and restriction to a milk diet while there is fever, change of climate and tonics. Cod liver oil is also useful.

Hospitalstidende, Copenhagen

February 2, LV, No. 5, pp. 109-148

159 Cooperation of Prostate in Emptying of the Bladder. (Om Prostatas Betydning ved Vandladningen og om Mekanismen ved prostatisk Vandladningsbesvær.) A. Lendorf.

February 7, No. 6, pp. 149-172

160 *Retarded Evacuation of Normal Stomach. (Forsinket Tømning ved normal Ventrikel.) K. Lunn.

160. **Delay in Evacuation of the Normal Stomach.**—Among the ten different causes which may induce delay in evacuation of the stomach when locally conditions are normal, reflex action from an intestinal affection, habitual constipation and ileus take the lead. In three of the five cases reported by Lunn these latter causes were manifest, the functional gastric disturbance being evidently secondary to more or less complete obstruction of the bowels. In another case a tumor could be palpated but it was impossible to determine whether it was in the stomach or pancreas or glands near by. Repeated tests of gastric functioning showed much retention after eight hours but the findings were otherwise normal, and a laparotomy revealed a bunch of tuberculous mesenteric glands.

Hygiea, Stockholm

February, LXXIV, No. 2, pp. 129-256

161 Study of Pemphigus Vegetans. (Om pemphigus vegetans.) C. Cronquist.

162 Melanotic Tumor in Spinal Dura Mater. (Ett fall af Chromatophorома duræ matris spinalis.) O. Lindbom.

Norsk Magazin for Lægevidenskaben, Christiania

March, LXXIII, No. 3, pp. 241-448

163 *Operative Treatment of Detachment of the Retina and Extreme Myopia. (Ny operativ behandling av nethindeavløsning og av høiere myopi. –Trepanatio scleræ præ-æquatorialis.) S. Holth.

164 Direct Causes of Death from Anemia. (Om dødsmaater og dødsaarsaker ved blødning og anæmi.) O. Hanssen.

165 Direct Causes of Death from Brain Disease. (Fortsatte iagttagelser vedrørende den letale respirationsparalyse ved hjernelidelser.) O. Hanssen.

166 Clinical Pathology of Coagulation of the Blood. (Forsinket koagulation ved cholæmi og hæmofili. Fibrinolyse. Caillot irretractile.) O. Hanssen.

167 Accessory Thyroid in Base of Tongue and Branchial Cysts. (Tungestrupna og mediane halscyster.) H. Schilling.

168 Experiences in Treatment of Fractures. (Extremitetsfrakturer behandlet paa Rikshospitalets Kirurg. avd. A 1908-1911.) C. Manthey.

163. **Operative Treatment of Detachment of the Retina and Extreme Myopia.**—The operation which Holth calls trepanatio scleræ pre-equatorialis was applied for glaucoma years ago, but Holth here extols its advantages for detachment of the retina and for extreme myopia. In three of his seven cases of the former the retina grew into place again after the operation and there has been no further trouble during the nine, thirteen and twenty months to date. After the operation patients with extreme myopia found their vision improved, so he has since been systematically applying the measure for extreme myopia without detachment of the retina, and found a change for the better of from 2 to 3 D; in one case vision improved from 17 to 6 D. No effect was apparent unless the myopia was 12 D to start with. He gives illustrations of the little trephine he uses and describes its application with the details of eight cases in which the method has been applied. The trephining is done in the lower outer quadrant, 12 mm. back of the limbus; he does not evacuate the subretinal fluid as a rule; if this is necessary he does it by scleral puncture far back of the trephining and at a later sitting.

Ugeskrift for Læger, Copenhagen

February 29, LXXIV, No. 9, pp. 323-370

169 *Chronic Appendicitis. (Nogle Tilfælde af kronisk Appendicitis.) R. W. Klær.

March 7, No. 10, pp. 371-402

170 Leg Ulcers. (Saarbehandling i poliklinisk Virksomhed.) C. Wessel.

169. **Chronic Appendicitis.**—Klær gives the details of eleven cases of chronic appendicitis which show that it is possible for it to manifest itself in the form of merely stomach or bowel trouble with or without very slight focal symptoms. In some cases it is only by prolonged study of the cases, especially repeated local examination and taking the temperature after exercise, that it is possible to differentiate the true cause of the trouble. When appendicitis is suggested one may learn of disturbances suggesting previous abortive acute attacks.

Books Received

JOURNAL Announcements, Books Received, Knocks and Boosts and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

V. 58
1912